DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING/CONSTRUCTION PERMIT

Permit No. 270TVP01 Issue Date: August 4, 2003
Application No.: 270 Expiration Date: September 3, 2008

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating/construction permit to the Permittee, **BP Exploration (Alaska) Inc.**, for the operation of the **Central Gas Facility**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130 (a) and (b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating/construction permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate No. 9273-AA016, as amended through December 23, 1996 and Air Quality Control Construction Permit No 9873-AC006 have been incorporated into this Operating/Construction Permit. This permit, in accordance with the provisions of 18 AAC 50.305(a)(3) revises or rescinds specific terms and conditions of Air Quality Control Permit-to-Operate 9273-AA016.

This Operating/Construction Permit becomes effective September 4, 2003.

John F. Kuterbach, Manager

Air Permits Program

Table of Contents

List of Abbreviations Used in this Permit

AAC .....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AS .....Alaska Statutes
ASTM .....American Society for Testing and Materials
BACT .....Best Available Control Technology
BHp .....Boiler Horsepower
C.F.R. .....Code of Federal Regulations
CO .....Carbon Monoxide
dscf.....Dry standard cubic foot
EPA .....US Environmental Protection Agency
gr./dscf .....grain per dry standard cubic foot (1 pound = 7000 grains)
GPH.....gallons per hour
HAPs or HACs.....Hazardous Air Pollutants or Hazardous Air Contaminants [*HAPs* or *HACs* as defined in AS 46.14.990(14)]
ID .....Source Identification Number
kPa.....kiloPascals
LAER .....Lowest Achievable Emission Rate
MACT .....Maximum Achievable Control Technology as defined in 40 C.F.R. 63.
MR&R.....Monitoring, Recordkeeping, and Reporting
NESHAPs .....Federal National Emission Standards for Hazardous Air Pollutants [*NESHAPS* as contained in 40 C.F.R. 61 and 63]
NO_X.....Nitrogen Oxides
NSPS .....Federal New Source Performance Standards [*NSPS* as contained in 40 C.F.R. 60]
O & M .....Operation and Maintenance
O_2 .....Oxygen
PM-10 .....Particulate Matter less than or equal to a nominal ten microns in diameter
ppm .....Parts per million
ppmv .....Parts per million by volume
ppmvd .....Parts per million by volume on a dry basis
psia .....Pounds per Square Inch (absolute)
PSD .....Prevention of Significant Deterioration
PTE .....Potential to Emit
SIC. .....Standard Industrial Classification
SO_2 .....Sulfur dioxide
TPH .....Tons per hour
TPY .....Tons per year
VOC .....volatile organic compound [*VOC* as defined in 18 AAC 50.990(103)]
VOL .....volatile organic liquid [*VOL* as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol% .....volume percent
wt% .....weight percent

Section 1. Identification

Names and Addresses

Permittee: **BP Exploration (Alaska) Inc.**
900 E. Benson Blvd. (zip 99508)
P.O. Box 196612
Anchorage, AK 99519-6612

Facility Name: **Central Gas Facility**

Location: Prudhoe Bay, Alaska: Section 11, Township 11N, Range 14E, Umiat Meridian

Physical Address: Prudhoe Bay, Alaska

Owners:

BP Exploration (Alaska) Inc.
900 E. Benson Blvd (Zip 99508)
P.O. Box 196612
Anchorage, AK 99519-6612

ChevronTexaco
11111S. Wilcrest (zip 77099)
P.O. Box 36366
Houston, TX 77236

ConocoPhillips Alaska, Inc.
700 G Street (Zip 99501)
P.O. Box 100360
Anchorage, AK 99510-0360

Forest Oil Corporation
310 K Street, Suite 700
Anchorage, AK 99501

ExxonMobil Alaska Production Inc.
3301 C Street, Suite 400 (Zip 99503)
P.O. Box 196601
Anchorage, AK 99511-6601

Operator: Same as Permittee

Permittee's Responsible Official: Craig L. Wiggs, GPB Operations Manager

Designated Agent: CT Corporation
801 W 10th St, Suite 300
Juneau, AK 99801

Facility and Building Contact: Christopher Schlueter/James Fausettl
(907) 659-8682

Fee Contact: James A. Pfeiffer, Air Specialist

Facility Process Description

SIC Code of the Facility: 1311 Crude Petroleum and Natural Gas
NAICS Code of the Facility: 211111

[18 AAC 50.350(b)(1), 1/18/97]

Section 2. General Emission Information

[18 AAC 50.350(b)(1), 1/18/97]

Emissions of Regulated Air Contaminants:

Nitrogen Oxides, Carbon Monoxide, Sulfur Dioxide, Particulate Matter (PM-10), Volatile Organic Compounds, and various Hazardous Air Pollutants (HAPs)

Facility Classifications:

(1) 18 AAC 50.300(b)(2) [containing a fuel-burning equipment with a rated capacity of ≥100 or more MMBtu/hr]

(2) 18 AAC 50.300(c)(1) [PSD – emits or has the PTE ≥ 250 TPY of a regulated air contaminant in an attainment or unclassifiable area for that contaminant per 18 AAC 50.015]

Operating Permit Classifications:

(1) 18 AAC 50.325(b)(1) [≥ 100 TPY of a regulated air contaminant]

(2) 18 AAC 50.325(b)(2) [≥ 10 TPY a HAC or ≥ 25 TPY in the aggregate of 2 or more HACs]

(3) 18 AAC 50.325(b)(3) [source subject to NSPS/NESHAPs standards (40 CFR 60, 61 & 63)]

(4) 18 AAC 50.325(c) [facility described in 18 AAC 50.300(b)-(e) within AS 46.14.130(b)(4)]

Section 3. Source Inventory and Description

[18 AAC 50.350(d)(2), 1/18/97]

Sources listed in Table 1 have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

ID	Tag No.	Source Description	Rating/size	Commenced Construction/ Startup or Modification/ Reconstruction Date[1]
Group I – Gas-Fired Turbines				
1	NGI-19-1883	GE Frame 6 Injection Compressor	53,665 hp ISO	4/1998
2	NGI-19-1884	GE Frame 6 Injection Compressor	53,665 hp ISO	4/1998
3	NGI-19-1885	GE Frame 6 Injection Compressor	53,665 hp ISO	4/1998
4	NGI-19-1886	GE Frame 6 Injection Compressor	53,665 hp ISO	4/1998
5	NGI-19-1801	Cooper-Rolls/RB211-24C Booster Compressor	33,300 hp ISO	1986
6	NGI-19-1802	Cooper-Rolls/RB211-24C Booster Compressor	33,300 hp ISO	1986
7	NGI-19-1805	Cooper-Rolls/RB211-24C Miscible Injectant Compressor	33,300 hp ISO	1986
8	NGI-19-1855	Cooper-Rolls/RB211-24C Miscible Injectant Compressor	33,300 hp ISO	1986
9	NGI-19-1806	GE MS5382C Refrigerant Compressor	38,000 hp ISO	7/1998
10	NGI-19-1856	GE MS5382C Refrigerant Compressor	38,000 hp ISO	8/1998
11	NGI-19-1857	GE MS5382C Booster Compressor	38,000 hp ISO	9/1999
Group II – Gas –Fired Heaters				
12	NGI-19-1401	Chiyoda-John Zink Hot Oil Heater	216 MMBtu/hr [heat input, LHV]	1986
13	NGI-19-1402	Chiyoda-John Zink Hot Oil Heater	216 MMBtu/hr [heat input, LHV]	1986
14	NGI-19-1403	Chiyoda-John Zink Hot Oil Heater	216 MMBtu/hr [heat input, LHV]	1986
Group III – Liquid-Fired Equipment				
15	NGI-19-2890	GM (EMD)/20-645F4B Emergency Electric Generator	2,865 kW/4,000 hp	1992
16	NGI-19-2802	GM (EMD)/20-645F4B Emergency Electric Generator	2,865 kW/4,000 hp	1986 (est.)
17	NGI-19-2819	GM (EMD)/20-645F4B Emergency Electric Generator	2,865 kW/4,000 hp	1986 (est.)
18	NGI-19-1529	Caterpillar/3406P Emergency Fire Water Pump	330 hp	1986 (est.)
Group IV – Flares				
19	19-1408	IHI-John Zink Emergency Flare (HP-Primary Pit)	3.0 MMscf/day combined total (pilot/purge/assist)	1986 (est.)
20	19-1409	IHI-John Zink Emergency Flare (LP-Primary Pit)		1986 (est.)
21	19-1410	IHI-John Zink Emergency Flare (HP-Emergency Pit)		1986 (est.)
22	19-1411	IHI-John Zink Emergency Flare (LP-Emergency Pit)		1986 (est.)
23	19-1412	IHI-John Zink Emergency Flare (NGL Burn Pit)		1986 (est.)
Group V – Fixed Roof Storage Tanks (>10,000 Gallon Capacity)				
24	19-1902	Arctic (No. 1) Diesel	2,175 bbls (91,350 gallons)	1986
25	19-1905	Methanol	934 bbls (39,228 gallons)	1986
Group VI – Natural Gas Processing Plant				
26	Modules and Skids[2]	NGL Plant	N/A	1993

1 – Date construction commenced (if known) or the startup date of the unit. If a unit has been modified as defined by AS 46.990, then the most recent modification date has been provided.

2 – Specific facility modules and skids that contain equipment subject to the Subpart KKK standards are:

19-4901	Inlet Module (connecting lines only)	19-4933	LTS 2 Gas/Liquid Exchanger Module
19-4902	Booster Compressor Module (plus connecting lines)	19-4934	LTS Gas/Gas Exchange Skid

19-4902A	Booster Compressor Module
19-4903	Booster Compressor Aftercoolers Skid
19-4904	Booster Compressor Module
19-4920	LTS 1 Separator Module
19-4924	LTS Economizer Module
19-4926	LTS 2 Refrigerant Compressor Module
19-4927	Refrigerant Compressor Skid
19-4928	Refrigerant Compressor Skid
19-4929	Refrigerant Compressor Skid
19-4930	Refrigerant Compressor Skid
19-4931	Refrigerant Storage Skid
19-4932	LTS 2 Separator Module
19-4935	NGL Divert Skid
19-4938	GHX-1 Inlet Separator Module
19-4938D	Inlet Expansion Module
19-4939	LTS 3 Module
19-4950	Utility/Stabilizer Utilidor (plus connecting lines)
19-1951	Stabilizer Module (plus connecting lines)
19-1951A	Stabilizer Preheater Skid
19-4953	Stabilizer Condenser Skid
19-4954	Miscible Injectant Compressor Module
19-4955	Miscible Injectant Compressor Module
19-4957	LTS 3 Booster Compressor Module

Section 4. Emission Fees

1. Assessable Emissions. The Permittee shall pay to the Department an annual emission fee based on the facility's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

1.1 the facility's assessable potential to emit of 13,265 TPY; or

1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the Department**.**

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

2. Assessable Emission Estimates. Emission fees will be assessed as follows:

2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795**;** the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 1.1.

[18 AAC 50.346(a)(1), 5/3/02 and 18 AAC 50.350(c) & 50.400 – 50.420, 1/18/97]

Section 5. Source-Specific Requirements

Fuel-Burning Equipment

3. Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 through 4 and 11 through 23 listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:

a. more than 20% for more than three minutes in any one hour[1],

[18 AAC 50.055(a)(1), 1/18/97 and 18 AAC 50.350(d)(1)(C), 6/21/98]
[40 C.F.R. 52.70, 7/1/01]

b. more than 20% averaged over any six consecutive minutes[2].

[18 AAC 50.055(a)(1) & 50.346(c), 5/3/02 and 18 AAC 50.350(d)(1)(C), 6/21/98]

The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 5 through 10 listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:

c. more than 20% for more than three minutes in any one hour[1],

[18 AAC 50.055(a)(1), 1/18/97 and 18 AAC 50.350(d)(1)(C), 6/21/98]
[40 C.F.R. 52.70, 7/1/01]

d. more than 20% averaged over any six consecutive minutes[2],

[18 AAC 50.055(a)(1) & 50.346(c), 5/3/02 and 18 AAC 50.350(d)(1)(C), 6/21/98]

e. more than 10% averaged over any six consecutive minutes.

[Federal Prudhoe Bay Unit PSD Permit No. PSD-X81-13, as amended 8/29/1997]

3.1 For Source ID(s) 1 through 14, burn only gas as fuel. Monitoring for these sources shall consist of an annual certification that each of these sources fired only gas. Report under condition 81 if any fuel is burned other than gas.

3.2 For each of Source ID(s) 15 through 18, as long as they do not exceed 400 hours of total (emergency and non-emergency hours combined) operation per consecutive 12-month period, monitoring shall consist of an annual certification of compliance with the opacity standard. Otherwise, monitor, record, and report visible emissions in accordance with Section 6.

3.3 For Source ID(s) 19 through 23 (flares), monitor, record and report in accordance with condition 45.

[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]

[1] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and condition 50.1 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

[2] The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP, which time this standard becomes federally enforceable.

4. Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from Source ID(s) 1 through 23 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.055(b)(1), 1/18/97 and 18 AAC 50.350(d)(1)(C), 6/21/98]

4.1 For Source ID(s) 1 through 14, burn only gas as fuel. Monitoring for these sources shall consist of an annual certification that each of these sources fired only gas. Report under condition 81 if any fuel is burned other than gas.

4.2 For each of Source ID(s) 15 through 18, as long as they do not exceed 400 hours of total (emergency and non-emergency hours combined) operation per consecutive 12-month period, monitoring shall consist of an annual certification of compliance with the particulate matter standard. Otherwise, monitor, record, and report in accordance with Section 6.

4.3 For Source ID(s) 19 through 23 (flares) the Permittee must annually certify compliance with the particulate matter standard.

[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]

5. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from Source ID(s) 1 through 23 to exceed 500 ppm averaged over three hours.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.055(c), 1/18/97; and 18 AAC 50.350(d)(1)(C), 6/21/98]

5.1 For Source ID(s) 1 through 14 and 19 through 23 using fuel gas:

a. Monitoring conducted as required by condition 28.1 satisfies the monitoring requirements necessary to assure compliance with this condition.

b. Keep records of analyses conducted in accordance with condition 28.2.

c. Report as excess emissions, in accordance with condition 81, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of condition 5.

d. Include copies of the records required by condition 5.1b with the facility operating report required by condition 83.

[18 AAC 50.350(g) - (i), 5/3/02]

5.2 For Source ID(s) 15 through 18, using liquid fuel from a North Slope topping plant, the Permittee shall obtain from the topping plant the results of a monthly fuel sulfur analysis.

a. The Permittee shall include in the facility operating report required by condition 83 a list of the sulfur content measured for each month covered by the report.

b. If the fuel contains greater than 0.75% sulfur by weight, the Permittee shall calculate SO_2 emissions in PPM using either the SO_2 material balance calculation in Section 16, or Method 19 of 40 C.F.R 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

c. If SO_2 emissions are calculated under condition 5.2b to exceed 500 ppm, the Permittee shall report under condition 81. The report shall document the calculation under condition 5.2b.

d. For fuel with a sulfur content greater than 0.75% by weight, the Permittee shall include in the facility operating report required by condition 83 the calculated SO_2 emissions in PPM.

[18 AAC 50.350(g) - (i) & 50.346(c), 5/3/02]

Turbine BACT (LHE Liners)

6. The Permittee shall operate Source ID(s) 9 through 11 with LHE liner combustion technology or alternative technology capable of achieving continuous compliance with the limits specified in Table 2. Monitoring shall consist of an annual certification that the Permittee complies with this condition.

[Construction Permit No. 9873-AC006, 7/15/98]

Turbine BACT and Owner Requested Emission Limits

7. The Permittee shall conduct a NO_X emission source test on any one of Source ID(s) 9, 10, and 11 and one NO_X emission source test on any one of Source ID(s) 1 through 4 no less than once every five years. Perform and submit results of source test in accordance with Section 11.

[Construction Permit No. 9873-AC006, 7/15/98]

8. The Permittee shall limit actual emissions from the turbines, Source ID(s) 1 through 11, as indicated in Table 2 below. Limits in Table 2 are not to be exceeded.

[18 AAC 50.335(g), 1/18/97]
[Construction Permit No. 9873-AC006, 7/15/98]
[Operating Permit No. 9273-AA016, as amended through 12/23/96]
[Federal Prudhoe Bay Unit PSD Permit No. PSD-X81-13, as amended 8/29/1997]

8.1 For Source ID(s) 5 through 10 calculate the monthly and the twelve-month consecutive summation of emissions of NO_X, CO, SO_2, and PM. Use the emission factors found in Section 17 of this permit, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for each unit.

8.2 For Source ID(s) 5 through 10 report the monthly and the consecutive twelve-month period summation of emissions, for each month of the reporting period, with each facility operating report required by condition 83.

8.3 Notify the Department per condition 81 should the twelve-month consecutive summation of emissions of any air contaminant exceed the limit for that contaminant in Table 2.

8.4 For Source ID(s) 5 through 8 monitor, record, and report in accordance with condition 27 to demonstrate compliance with the short-term BACT NO_X emission limit in Table 2.

8.5 For Source ID(s) 1 through 4, and 9 through 11 use the results of the source tests performed in accordance with condition 7 to demonstrate compliance with the short-term NO_X emission limits contained in Table 2, both the concentration (ppmv) and loading rate (lb/hr).

8.6 For Source ID(s) 1 through 4, and 9 through 11 submit copies of the results obtained from condition 8.5 with the facility operating report required by condition 83 submitted during the reporting period in which the sources test results are submitted under condition 75.

8.7 For Source ID(s) 1 through 11 to show compliance with the short-term CO emission limits contained in Table 2 the Permittee shall keep records, available for inspection, which demonstrate each turbine is maintained in good operating condition and in accordance with BPXA established guidelines and operating procedures.

8.8 Notify the Department per condition 81 should the emissions of any air contaminant exceed the limit for that contaminant in Table 2.

[18 AAC 50.350(g) – (i), 5/3/02]

Table 2 – Turbine BACT and Owner Requested Emissions Limits (Limits from AQC Construction Permit No. 9873-AC006 are *italicized,* the limit from AQC Operating Permit No. 9273-AA016 is <u>underlined</u>, and limits requested by the Permittee are **bold.** All other limits are from EPA permit PSD-X81-13.)

Pollutant	Source ID(s)	Make/Model	Equipment Tag Number	Emission Limit (short-term) per Individual Turbine	Annual Emission Limit per Individual Turbine (tpy)[1]
NO_X	1, 2, 3, and 4	GE Frame 6	NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886	*125 ppmvd @ 15% O_2 and 282 lb/hr*	No limit
	5, 6, 7, and 8	Cooper-Rolls RB211-24C	NGI-19-1801, NGI-19-1802, NGI-19-1805, and NGI-19-1855	213 ppmvd @ 15% O_2	999
	9 & 10	GE MS5382C	NGI-19-1806 and NGI-19-1856	*85 ppmvd @ 15% O_2 and 130 lb/hr*	1,115
	11	GE MS5382C	NGI-19-1857	*85 ppmvd @ 15% O_2 and 130 lb/hr*	No limit

Pollutant	Source ID(s)	Make/Model	Equipment Tag Number	Emission Limit (short-term) per Individual Turbine	Annual Emission Limit per Individual Turbine (tpy)[1]
CO	1, 2, 3, and 4	GE Frame 6	NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886	*10 ppmvd*	No limit
	5, 6, 7, and 8	Cooper-Rolls RB211-24C	NGI-19-1801, NGI-19-1802, NGI-19-1805, and NGI-19-1855	0.17 lb/MMBtu	193
	9 & 10	GE MS5382C	NGI-19-1806 and NGI-19-1856	0.17 lb/MMBtu *and 20 ppmvd*	269
	11	GE MS5382C	NGI-19-1857	*20 ppmvd*	No limit
SO_2	1, 2, 3, and 4	GE Frame 6	NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886	*30 ppmv H_2S in fuel (not to be exceeded at any time)*	No limit
	5, 6, 7, and 8	Cooper-Rolls RB211-24C	NGI-19-1801, NGI-19-1802, NGI-19-1805, and NGI-19-1855	**30 ppmv H_2S in fuel (annual average)**	6.5
	9 & 10	GE MS5382C	NGI-19-1806 and NGI-19-1856	*30 ppmv H_2S in fuel (not to be exceeded at any time)*	9.0
	11	GE MS5382C	NGI-19-1857		No limit
PM	1, 2, 3, and 4	GE Frame 6	NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886	14.0 lb/MMscf	No limit
	5, 6, 7, and 8	Cooper-Rolls RB211-24C	NGI-19-1801, NGI-19-1802, NGI-19-1805, and NGI-19-1855	No Limit	16
	9 & 10	GE MS5382C	NGI-19-1806 and NGI-19-1856		22
	11	GE MS5382C	NGI-19-1857		No limit

Notes: 1) All emission limitations are annual average unless otherwise noted.
2) All turbine group emission limits for NO_X refer to full load, ISO conditions.
3) All other emission limits refer to full load, standard conditions.

Heater BACT and Owner Requested Emission Limits

9. The Permittee shall limit actual emissions from the heaters, Source ID(s) 12, 13, and 14, as indicated in Table 3 below. Limits in Table 3 are not to be exceeded.

[18 AAC 50.335(g), 1/18/97]
[Federal Prudhoe Bay Unit PSD Permit No. PSD-X81-13, as amended 8/29/1997]

9.1 The Permittee shall calculate the monthly and the twelve-month consecutive summation of emissions of NO_X, CO, PM, and SO_2 for Source ID(s) 12, 13, and 14. Use the emission factors found in Section 17 of this permit, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for each unit.

9.2 Report the monthly and the consecutive twelve-month period summation of emissions, for each month of the reporting period, with each facility operating report required by condition 83.

9.3 Notify the Department per condition 81 should the twelve-month consecutive summation of emissions of any air contaminant exceed the limit for that contaminant in Table 3.

[18 AAC 50.350(g) – (i), 5/3/02]

Table 3 – Heater BACT and Owner Requested Emissions Limits (The limit requested by the Permittee is **bold.** All other limits are from EPA permit PSD-X81-13.)

Pollutant	Source ID(s)	Make/Model	Equipment Tag Number	Emission Limit (short-term) per Individual Heater	Annual Emission Limit per Individual Heater (tpy)
NO_X	12, 13, and 14	Chiyoda – John Zink	NGI-19-1401, NGI-19-1402, and NGI-19-1403	0.08 lb/MMBtu	84
CO				0.061 lb/MMBtu	64
PM				No Limit	12
SO_2				**30 ppmv H_2S in fuel (annual average)**	5.4

Notes: 1) All emission limitations are annual average unless otherwise noted.
2) All emission limits refer to full load, standard conditions.

Engine BACT Emission Limits

10. The Permittee shall limit actual emission rates from the engine, Source ID 15, as indicated in Table 4 below. Limits in Table 4 are not to be exceeded.

[Operating Permit No. 9273-AA016, as amended through 12/23/96]

Table 4 – Engine BACT Emissions Limits

Pollutant	Source ID	Make/Model	Equipment Tag Number	Emission Limit (short-term)	Annual Emission Limit (tpy)
NO_X	15	GM Diesel	NGI-19-2890	146.4 lb/hr	No Limit
CO				2.8 lb/hr	
PM				1.0 g/hp-hr	
SO_2				No Limit	

Notes: 1) All emission limitations are annual average unless otherwise noted.
2) All emission limits refer to full load, standard conditions.

10.1 To show compliance with the short-term NO_x, CO, and PM emission limits contained in Table 4, the Permittee shall keep records, available for inspection, which demonstrate the engine is maintained in good operating condition and in accordance with BPXA established guidelines and operating procedures.

10.2 Notify the Department per condition 79 should the emissions of any air contaminant exceed the limit for that contaminant in Table 4.

[18 AAC 50.350 (g) – (i), 5/3/02]

Engine Hours of Operation Limit (BACT Limit for Source ID 15 only)

11. The Permittee shall limit hours of non-emergency operation for Source ID(s) 15 through 18 to no more than 200 hours per consecutive 12-month period, per source.

[Operating Permit No. 9273-AA016, as amended through 12/23/96]

11.1 Monitor and record the monthly hours of non-emergency operation and the consecutive 12-month summation for each of Source ID(s) 15 through 18.

11.2 Report the monthly and consecutive 12-month total of non-emergency hours that each of Source ID(s) 15 through 18 operated each month of the reporting period with the facility operating report required by condition 83.

11.3 Report under condition 81 if the consecutive 12-month total hours of non-emergency operation exceed the limit for Source ID(s) 15, 16, 17, or 18 in condition 11.

[18 AAC 50.350 (g) – (i), 5/3/02]

Fuel Consumption Monitoring

12. The Permittee shall maintain, and operate a monitoring device (e.g. a fuel gas meter) or provide other means of estimating fuel consumption to determine the volume of fuel gas consumed by the turbines, (Source ID(s) 1 through 11) and the heaters (Source ID(s) 12 through 14). Fuel meters, if used, for Source ID(s) 1 through 4 and 9 through 11 must be calibrated to be accurate within ±5 %, as verified by vendor specifications and calibration maintenance logs. For Source ID(s) 15 through 23 the fuel consumption may be estimated.

[Operating Permit No. 9273-AA016, as amended through 12/23/96]
[Construction Permit No. 9873-AC006, 7/15/98]

12.1 Monitor and record the monthly fuel consumption for each of Source ID(s) 1 through 4 and 9 through 11, Source ID(s) 5 through 8 combined, Source ID(s) 12 through 14 combined, Source ID(s) 15 through 18 combined, and Source ID(s) 19 through 23 combined.

12.2 Report using the facility operating report under condition 83, the monthly total fuel consumption (MMscf/month or gallons/month) for each of Source ID(s) 1 through 4 and 9 through 11, Source ID(s) 5 through 8 combined, Source ID(s) 12 through 14 combined, Source ID(s) 15 through 18 combined, Source ID(s) 19 through 23 combined, and the facility total fuel consumption for each month of the reporting period.

[18 AAC 50.350(g) – (i), 5/3/02]

Fuel Gas Sulfur Content

13. The Permittee shall not use fuel gas, in Source ID(s) 1 through 14, with a hydrogen sulfide (H_2S) concentration that exceeds 30 ppmv at standard conditions. For Source ID(s) 1 through 4 and 9 through 11, this limit is not to be exceeded at any time. For Source ID(s) 5 through 8 and 12 through 14, this is an annual average limit. Upon completion of Department approved air quality modeling, this limit will be revised.

[18 AAC 50.350(f)(4), 1/18/97]
[Construction Permit No. 9873-AC006, 7/15/98]

13.1 Monitor and record according to conditions 28.1 and 28.2.

13.2 Report the monthly fuel gas H_2S concentration, for each month of the reporting period, with each facility operating report required by condition 83.

13.3 Notify the Department per condition 81 should the fuel gas H_2S concentration exceed the limit in condition 13.

[18 AAC 50.350(g) – (i), 5/3/02]

Hours of Operation Monitoring

14. The Permittee shall monitor, record and report the hours of operation as follows.

[Construction Permit No. 9873-AC006, 7/15/98]
[Operating Permit No. 9273-AA016, as amended through 12/23/96]

14.1 Monitor and record the monthly operating time for each of Source ID(s) 1 through 18.

14.2 Report using the facility operating report under condition 83, the data recorded under condition 14.1.

[18 AAC 50.350(g) – (i), 5/3/02]

Sources Subject to Federal New Source Performance Standards (NSPS), Subpart A

15. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records for Source ID(s) 1 through 14, and 19 through 23 in accordance with 40 CFR 60.7(b).

[18 AAC 50.350(h), 5/3/02 & 18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.7(b), Subpart A, 7/1/01]

16. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. For Source ID(s) 1 through 14 the Permittee shall comply with 40 CFR 60.7(c) and (d).

[18 AAC 50.350(i), 5/3/02 & 18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.7(c) & (d), Subpart A, 7/1/01]

17. NSPS Subpart A Performance (Source) Tests. At such times as may be required by the NSPS Administrator, the Permittee shall conduct source tests for Source ID(s) 1 through 11 according to Section 11 of this permit and 40 C. F. R. 60.8 and shall provide the Department and EPA with a written report of the results of the source test.

[18 AAC 50.040(a)(1), 8/15/02]
[Federal Citation: 40 C.F.R. 60.8(a) - (e), Subpart A, 7/1/01]
[18 AAC 50.350(i), 5/3/02]

18. NSPS Subpart A Good Air Pollution Control Practice. The Permittee shall, maintain and operate Source ID(s) 1 through 14, 19 through 23, and 26 in accordance with 40 CFR 60.11(d).

[18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.11(d), Subpart A, 7/1/01]

19. NSPS Subpart A, Monitoring. The Permittee shall maintain and operate a Continuous Monitoring System (CMS) for Source ID(s) 12 through 14 required under condition 24 in accordance with 40 CFR 60.13.

[18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.13, Subpart A, 7/1/01]

20. NSPS Subpart A Credible Evidence. The credible evidence rule of 40 CFR 60.11(g) applies to Source ID(s) 1 through 14, 19 through 23, and 26.

[18 AAC 50.040(a)(1), 8/15/02]
[40 C.F.R. 60.11(g), Subpart A, 7/1/01]

21. NSPS Subpart A Concealment of Emissions. The Permittee shall not conceal emissions from Source ID(s) 1 through 14, 19 through 23, and 26 as provided in 40 CFR 60.12. Monitoring shall consist of an annual certification that the Permittee does not conceal emissions.

[18 AAC 50.040(a)(1), 8/15/02]

[40 C.F.R. 60.12, Subpart A, 7/1/01]

22. NSPS Subpart A, General Control Device Requirements. The Permittee shall monitor Source ID(s) 19 through 23, flares used as control devices for Source ID 26, to ensure that they are operated and maintained in conformance with 40 CFR 60.18(c)(1), (c)(2), (c)(3), (c)(4), (c)(6), 60.18(d), 60.18(e), 60.18(f)(1), (f)(2), (f)(3), (f)(4), (f)(5), and 40 CFR 60.485(g).

[18 AAC 50.040(a)(1), 50.040(a)(2)(Z), 50.040(a)(2)(DD), 8/15/02]
[40 CFR 60.18(b) – (f), Subpart A, 7/1/01]
[40 CFR 60.633(g), Subpart KKK, and 60.485(g), Subpart VV, 7/1/01]

22.1 Momentarily observe the exhaust from Source IDs 19 through 23 during normal operation for indications of visible emissions (VE). Keep a log of the observations in accordance with condition 22.3. Observations may be made via remote video camera monitoring from the control room if an operator cannot see the exhaust of Source IDs 19 through 23 through a window or can not go outside for safety or weather reasons to make observations.

a. Initial Monitoring Frequency: Observe the exhaust during each calendar day that Source IDs 19 through 23 operate.

b. Reduced Monitoring Frequency: After Source IDs 19 through 23 have been observed on 30 operating days, if during normal operations the sources operated without visible emissions in the exhaust for those 30 days, then observe the exhaust at least once in every calendar month that Source IDs 19 through 23 operate.

[18 AAC 50.350(g), 5/3/02]

22.2 Except as provided in condition 22.2e, if visible emissions are observed at any time during normal flaring operations of Source IDs 19 through 23, the Permittee shall conduct a visible emission VE evaluation in accordance with 40 CFR 60 Appendix A, Method 22. The Method 22 VE observation period shall not be less than 2-hours in duration, sufficient to document a violation of 40 CFR 60.18(c)(1). Observation of the flares may be postponed for safety or weather reasons. If visible emissions are noted for a total of more than 5 minutes during the Method 22 VE observation:

[18 AAC 50.350(g) & (h), 5/3/02]
[40 CFR 60.18(c)(1) & (f)(1), Subpart A, 7/1/01]
[40 CFR 60.485(g)(1), Subpart VV, 7/1/01]

a. Determine whether the flares are being properly operated and maintained.

b. Initiate corrective actions, if necessary, to eliminate visible emissions from the source(s) within 24 hours of the Method 22 VE observation;

c. Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce visible emissions; and

d. After completing the corrective actions, conduct a follow-up VE evaluation in accordance with 40 CFR 60 Appendix A, Method 22 within 3 days. The Method 22 VE observation period shall not be less than 2-hours in duration. The 3-day time limit to conduct observations may be extended by the Department for sufficient cause.

e. Visible emissions observed during startup, shutdown or malfunction shall not be considered a violation of 40 CFR 60.18(c)(1).

[40 CFR 60.11(c), Subpart A, 7/1/01]

22.3 For observations of visible emissions per condition 22.1 and for any Method 22 observations per condition 22.2, record the following information in a written log for each observation of Source IDs 19 through 23:

a. From Table 1, the ID of the source observed;

b. The date, time, and duration of the observation;

c. For observations conducted per:

(i) condition 22.1, whether visible emissions are present or absent in the exhaust plume, or

(ii) condition 22.2, accumulated time visible emissions are present in the exhaust;

d. A description of the background to the exhaust during the observation;

e. Name and location of the person making the observation; and

f. Keep records in accordance with condition 22.2c.

[18 AAC 50.350(h), 5/3/02]

22.4 The Permittee shall monitor the presence of the flare pilot using a thermocouple or other equivalent device.

[40 CFR 60.18(c)(2) & (f)(2), Subpart A, 7/1/01]
[40 CFR 60.485(g)(2), Subpart VV, 7/1/01]

a. The Permittee shall maintain records of all periods of operation during which the flare pilot flame is absent.

[18 AAC 50.350(h), 5/3/02]

22.5 The Permittee shall determine the actual exit velocity of Source IDs 19 through 23 using the methods outlined in 40 CFR 60.18(f)(4) or by an alternate method approved by the Administrator.

[40 CFR 60.18(c)(4) & (f)(4), Subpart A, 7/1/01]
[40 CFR 60.485(g)(7), Subpart VV, 7/1/01]

a. The Permittee shall maintain records of the initial performance test and any subsequent test(s) requested by the Department or by EPA that show the actual flare exit velocity.

[18 AAC 50.350(h), 5/3/02]

22.6 In accordance with condition 81 report excess emissions or permit deviations as follows:

a. The dates and reasons for failure to conduct monitoring or recordkeeping per conditions 22.1, 22.2, 22.3, 22.4, and 22.5.

b. When the exhaust of any of Source IDs 19 through 23 is visible for more than a total of five (5) minutes during any two (2) consecutive hours, except if the emissions are observed during startup, shutdown or malfunction.

c. When the pilot flame is absent from any of Source IDs 19 through 23.

d. When the heating value of flared gas is less than 200 Btu/scf.

e. When the actual exit velocity of any of Source IDs 19 through 23 obtained as a result of tests conducted per condition 22.5 exceeds the maximum permitted exit velocity determined in accordance with 40 CFR 60.18(f)(5).

[18 AAC 50.350(i), 5/3/02]
[Federal Citation: 40 CFR 60.11(c), Subpart A, 7/1/01]

22.7 Submit with the facility operating report required under condition 83:

a. The number of days that VE observations per condition 22.1 were made, and the dates, if any, that a Method 22 VE per condition 22.2 was observed;

b. Copies of records required under conditions 22.2c, 22.3, 22.4a, and 22.6.

[18 AAC 50.350(i), 5/3/02]

Volatile Organic Liquid Storage Vessels (Tanks) Subject to NSPS Subpart Kb

23. NSPS Subpart Kb Requirements (Recordkeeping Only). For Source ID(s) 24 and 25, the Permittee shall keep readily accessible records for the life of the tank showing the dimensions and an analysis showing the capacity of the tank.

[18 AAC 50. 350(h), 5/3/02 & 18 AAC 50.040(a)(2)(M), 8/15/02]
[40 C.F.R. 60.110(c) and 60.116b(a) & (b), Subpart Kb, 7/1/01]

Industrial-Commercial-Institutional Stream Generating Units Subject to NSPS Subpart Db

24. NSPS Subpart Db Requirements. The Permittee shall not allow the exhaust gas concentration of NO_X (expressed as NO_2) from Source ID(s) 12 through 14 to exceed 0.10 lb/MMBtu (low heat release rate, 30-day rolling average) at any time.

[18 AAC 50.040(a)(2)(C), 8/15/02]
[40 C.F.R. 60.44b(a)(1)(i), 60.44b(h), 60.44b(i), & 60.46b(a), Subpart Db, 7/1/01]

25. NO_X Monitoring, Recordkeeping, and Reporting for NSPS Subpart Db Heaters

[40 C.F.R. 60.46b(e)(4), 60.48b(b), (c), (d), (e), (f) & (g), 60.13, 7/1/01]
[40 C.F.R. 60.49b(d) & (g)(1) - (9), 7/1/01]
[40 C.F.R. 60.49b(h)(2) & (h)(4), 60.49b(i), (v), & (w), 7/1/01]

25.1 The Permittee shall, upon request, determine compliance with the NO_X emission standard of condition 24 in accordance with 40 CFR 60.46b(e)(4).

25.2 Calibrate, maintain, and operate a continuous monitoring system (CEMS), and record the output of the system, for measuring NO_X emissions discharged to the atmosphere in accordance with 40 CFR 60.48b(b), (c), (d), (e), (f), and (g) and sections of 40 CFR 60.13 applicable to CEMS calibration, maintenance, and operation.

25.3 Maintain records in accordance with 40 CFR 60.49b(d), and §60.49b(g)(1) through (9).

25.4 Submit excess emissions reports to the EPA in accordance with 40 CFR 60.49b(h)(2) and (h)(4), and condition 16.

25.5 Submit periodic reports to the Administrator in accordance with 40 CFR 60.49b(i) and (w). The Permittee may elect to submit periodic reports in accordance with 40 CFR 60.49b(v).

25.6 Submit a copy of the records kept in accordance with condition 25.3 to the Department upon request.

25.7 Submit a copy of the excess emissions report required by conditions 16 and 25.4 with the facility operating report required by condition 83.

25.8 Notify the Department per condition 81 should the calculated 30-day rolling average of NO_X emissions exceed the limit in condition 24.

[18 AAC 50.350(g) - (i), 5/3/02]

Turbines Subject to NSPS Subpart GG, Source ID(s) 5 through 11

26. NSPS Subpart GG NO_X Standard. The Permittee shall not allow the exhaust gas concentration of NO_X from Source ID(s) 5 through 11 to exceed the standard found in 40 CFR 60.332(a)(2). Based on the provisions of the standard, the corrected exhaust gas NO_X concentration standards for Source ID(s) 5 through 11 are as follows:

a. Source ID(s) 5 through 8 shall not exceed 213 ppmv at 15 percent O_2 dry exhaust basis, ISO, and

b. Source ID(s) 9 through 11 shall not exceed 176 ppmv at 15 percent O_2 dry exhaust basis, ISO.

[18 AAC 50.040(a)(2)(V), 8/15/02]
[40 C.F.R. 60.332(a) (2), Subpart GG, 7/1/01]

27. NO_X Monitoring, Recordkeeping, and Reporting for NSPS Subpart GG Turbines.

27.1 **Waivers**. The Permittee shall provide to the Department a written copy of any U.S. EPA granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules upon request by the Department. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule on file.

27.2 **Periodic Testing**.

a. **Initial Periodic Testing.** For each turbine subject to conditions 8 and/or 26 that operates for 400 hours or more in any 12 month period during the life of this permit, the Permittee shall satisfy either condition 27.2a(i) or 27.2a(ii).

(i) For existing turbines not represented by emission data described in condition 27.2a(ii), the Permittee shall conduct a NO_x and O_2 source test under 40 C.F.R. 60, Appendix A-7, Method 20 or following another protocol approved by the Department within three years after issuance of this permit

(A) for each turbine, or

(B) on one turbine to represent a group of turbines, if allowed to do so under condition 27.3.

(ii) If a test following 40 C.F.R. 60, Appendix A-7, Method 20 or following another protocol approved by the Department has been conducted on a turbine within two years before the issuance date of this permit, and the test shows that emissions at maximum load are less than 90 percent of the applicable emission limit(s) in conditions 8 and/or 26, then

(A) the Permittee may use those test results to represent emissions from that turbine or for a group of turbines if allowed under condition 27.3 until the testing of condition 27.2a(ii)(B) is performed; and

(B) the Permittee shall conduct a Method 20 test or a test following any other protocol approved by the Department on each turbine, or on one of a group of turbines as allowed under condition 27.3, within the 5 years of the permit term.

b. **Higher Tier Testing.** For each turbine with test results under condition 27.2a that are 90 percent or more of the applicable emission limit(s) of conditions 8 or 26, or for which emissions will equal or exceed 90 percent of the emission limit at maximum load, as shown through condition 27.4, the Permittee shall conduct an additional Method 20 test or a test following any other protocol approved by the Department for the turbine within one year of the test under condition 27.2a. The Permittee shall conduct at least one additional test per year until at least two consecutive tests show that emissions for the turbine are less than 90 percent of the limit at loads up to maximum load.

27.3 **Substituting Test Data.** The Permittee may use a test under conditions 27.2a or 27.2b performed on only one of a group of turbines to satisfy the requirements of those conditions for the other turbines in the group if

a. the Permittee demonstrates that test results are less than 90 percent of the applicable emission limit(s) of conditions 8 and/or 26, and are projected under condition 27.4 to be less than 90 percent of the limit at maximum load;

b. for any source test done after the issuance date of this permit, the Permittee identifies in a source test plan under condition 73

(i) the turbine to be tested;

(ii) the other turbines in the group that are to be represented by the test; and

(iii) why the turbine to be tested is representative, including that each turbine in the group

(A) is located at a facility operated and maintained by the Permittee;

(B) is the same make and model and has identical fuel nozzles and combustor;

(C) uses the same fuel type; and

c. for any source test done before the issuance date of this permit and used under condition 27.2a(ii), the Permittee

(i) demonstrates why the test results are representative of emissions from the entire group of turbines, including that each turbine in the group

(A) is located at a facility operated and maintained by the Permittee;

(B) is the same make and model and has identical fuel nozzles and combustor;

(C) uses the same fuel type; and

(ii) submits all results of source testing that has been performed on each turbine in the group, regardless of the date of the test, and certifies that the submittal is complete, consistent with 18 AAC 50.205.

27.4 **Load**.

a. The Permittee shall conduct all tests under condition 27.2 in accordance with 40 C.F.R. 60.335(c)(3), except as otherwise approved in writing by the Department, or by EPA if the circumstances at the time of the EPA approval are still valid. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and facility operating conditions in effect at the time of the test.

b. The Permittee shall demonstrate in the source test plan for any test performed after the issue date of this permit whether the test is scheduled when maximum NO_x emissions are expected.

c. If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,

(i) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report

(A) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and

(B) a demonstration based on the additional test information that projects the test results from condition 27.2 to predict the highest load at which emissions will comply with the applicable limit(s) in conditions 8 and/or 26;

(ii) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the applicable limit(s) of conditions 8 or 26;

(iii) the Permittee shall comply with a written finding prepared by the Department that

(A) the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load;

(B) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or

(C) the Permittee must retest during a period of greater expected demand on the turbine; and

(iv) the Permittee may revise a load limit by submitting results of a more recent approved test done at a higher load, and, if necessary, the accompanying information and demonstration described in condition 27.4c(i); the new limit is subject to any new Department finding under condition 27.4c(iii)and

d. In order to perform an emission test, the Permittee may operate a turbine at a higher load than that prescribed by condition 27.4c.

e. For the purposes of conditions 27.2 through 27.6, maximum load means the hourly average load that is the smallest of

(i) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;

(ii) the highest load allowed by an enforceable condition that applies to the turbine; or

(iii) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

27.5 **Recordkeeping**.

a. The Permittee shall comply with the following for each turbine for which a demonstration under condition 27.4c does not show compliance with the applicable limit(s) of conditions 8 or 26 at maximum load.

(i) The Permittee shall keep records of

(A) load; or

(B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.

(ii) Records in condition 27.5a shall be hourly or otherwise as approved by the Department.

(iii) Within one month after submitting a demonstration under condition 27.4c(i)(B) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under condition 27.4c(iii), whichever is earlier, the Permittee shall propose to the Department how they will measure load or load surrogates, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.

b. For any turbine subject to conditions 8 and/or 26, that will operate less than 400 hours in any 12 consecutive months, keep monthly records of the hours of operation. If a turbine that normally operates less than 400 hours exceeds that total during any 12 month period,

(i) test according to condition 27.2; or

(ii) if it is no longer possible to meet that schedule, test within one year of exceeding 400 hours in 12 consecutive months.

27.6 **Reporting**.

a. In each facility operating report under condition 83 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under condition 27.4c

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under condition 27.5a during the period covered by the facility operating report.

b. In each facility operating report under condition 83 for each turbine for which condition 27.2 has not been satisfied because the turbine normally operates less than 400 hours in any 12 months, the Permittee shall identify

(i) the turbine;

(ii) the highest number of operating hours for any 12 months ending during the period covered by the report; and

(iii) any turbine that operated for 400 or more hours.

c. The Permittee shall report under condition 81 if

(i) a test result exceeds the emission standard;

(ii) testing is required under condition 27.2 or 27.5b but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by conditions 27.4c(ii) and 27.4c(iii); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

[18 AAC 50.350(g) - (i), 5/3/02, 50.220(a) - (c), 1/18/97, & 50.040(a)(1), 8/15/02]
[40 CFR 60.8(b), Subpart A, 7/1/01]

28. NSPS Subpart GG Sulfur Standard. The Permittee shall not allow the sulfur content of the fuel burned in Source ID(s) 1 through 11 to exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V), 8/15/02]
[40 C.F.R. 60.333(b), Subpart GG, 7/1/01]

28.1 Monitoring - Determine compliance monthly with the fuel sulfur content standard in this condition as follows:

[40 C.F.R. 60.335(d), Subpart GG, 7/1/01]
[Alternative Monitoring Plan, 10/2/97]
[Custom Fuel Monitoring Schedules, 10/18/93 and 8/19/96]
[18 AAC 50.350(g), 5/3/02]

a. For gaseous fuels, determine the sulfur content of the fuel using ASTM D 4810-88, ASTM D 4913-89, Gas Producer's Association (GPA) method 2377-86, or an alternative analytical method approved by the Administrator.

b. The fuel sulfur analysis required under this condition may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[40 C.F.R. 60.335(e), Subpart GG, 7/1/01]

28.2 Recordkeeping - Keep records of analyses conducted per condition 28.1a.

[18 AAC 50.350(h), 5/3/02]

28.3 Reporting –

a. The Permittee shall semi-annually report to the EPA results of all sulfur monitoring required by condition 28.1.

[Custom Fuel Monitoring Schedule, 10/18/93]

b. For the purpose of EEMSP reports and summary reports required under condition 16, report any period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent sulfur by weight as excess emissions.

[40 C.F.R. 60.334(c)(2), Subpart GG, 7/1/01]
[Custom Fuel Monitoring Schedule, 10/18/93]

c. Include copies of the records required by condition 28.2 with the facility operating report required by condition 83.

[18 AAC 50.350(i), 5/3/02]

NSPS Subpart KKK, Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants

Standards (including Monitoring and Repairs)

Pumps in Light Liquid Service (40 CFR 60.482-2)

29. Pumps in light liquid service shall be checked by visual inspection each calendar week for indications of a leak[3].

29.1 When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

29.2 A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

[18 AAC 50.040(a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-2(a)(2),(b)(2), & (c) & 60.482-9, Subpart VV, 7/1/01]

Compressors (40 CFR 60.482-3)

30. Affected compressors shall either be equipped with a seal system which vents to a closed vent system designed and operated in accordance with conditions 36 and 36.1 through 36.5 (40 CFR 60.482-10), or a seal system that includes a barrier fluid system and that prevents leakage of volatile organic compounds (VOC) to the atmosphere, designed and operated in accordance with provisions of 40 CFR 60.482-3(b), (c), and (d).

[18 AAC 50.040(a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-3(b), (c), & (d), Subpart VV, 7/1/01]

30.1 The sensor(s) for the compressor barrier fluid systems and/or seal systems shall be checked daily or shall be equipped with an audible alarm.

30.2 When a leak is detected[4], it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

30.3 A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

[18 AAC 50.040(a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-3(e), (f), & (g) & 60.482-9, Subpart VV, 7/1/01]

Pressure Relief Devices in Gas/Vapor Service (40 CFR 60.482-4 and §60.633(b))

[3] A leak is defined for purposes of this condition as any indications of liquids dripping from the pump seal [ref. 40 CFR 60.482-2(b)(2)].
[4] A leak is defined for purposes of this condition as any failure of the seal system, the barrier fluid system, or both [ref. 40 CFR 60.482-3(f)].

31. Except during pressure releases, each pressure relief device in gas/vapor service that vents to atmosphere shall be operated with no detectable emissions[5], except as provided by condition 32.

[40 CFR 60.633(a), Subpart KKK, 7/1/01]

31.1 Pressure relief devices that vent to atmosphere shall be returned to a condition of no detectable emissions, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482-9.

31.2 Pressure relief devices that vent to atmosphere shall be monitored in accordance with 40 CFR 60.485(c) using Method 21 (40 CFR 60, Appendix A-7) to confirm the condition of no detectable emissions no later than 5 calendar days after any pressure release.

[18 AAC 50.040(a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-4(a) & (b) & 60.482-9, Subpart VV, 7/1/01]
[40 CFR 60.485(c), Subpart VV, 7/1/01]

32. In lieu of meeting the requirements of conditions 31, 31.1, and 31.2, the Permittee may elect to comply with the following:

32.1 Each pressure relief device in gas/vapor service may be monitored within 5 days after each pressure release to detect leaks in accordance with 40 CFR 60.485(b) using Method 21 (40 CFR 60, Appendix A-7).[6] Method 21 monitoring is not required if the Permittee assumes that a leak would be detected by such monitoring and proceeds with leak repairs per conditions 32.2 and 32.3.

32.2 When a leak is detected[7], it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.

32.3 A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

[40 CFR 60.633(b), Subpart KKK, 7/1/01]
[40 CFR 60.485(b), Subpart VV, 7/1/01]

Open-ended Valves or Lines (40 CFR 60.482-6)

33. Open-ended valves or lines shall be equipped with a cap, blind flange, plug or a second valve and shall be operated in accordance with provisions of 40 CFR 60.482-6.

[18 AAC 50.040(a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-6, Subpart VV, 7/1/01]

[5] Emissions are detected as defined for this condition as any Method 21 reading of 500 ppm or greater above background [ref. 40 CFR 60.482-4(b)(1)].

[6] Pressure relief devices in gas/vapor service are exempt from the routine (quarterly) monitoring requirement of §60.633(b)(1) [ref. 40 CFR 60.633(e)].

[7] A leak is defined for this condition as any Method 21 reading of 10,000 ppm or greater [ref. 40 CFR 60.633(b)(2)], or any evidence of a leak that the Permittee considers a leak.

Valves in Gas/Vapor Service and in Light Liquid Service (40 CFR 60.482-7)

34. For valves in gas/vapor service and in light liquid service, if a leak is detected[8], the valve shall be monitored monthly in accordance with 40 CFR 60.485(b) using Method 21 (40 CFR 60, Appendix A-7) until a leak is not detected for 2 successive months. Method 21 monitoring is not required if the Permittee assumes that a leak would be detected by such monitoring and proceeds with leak repairs per conditions 34.1 and 34.2.

34.1 When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9.

34.2 A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. This shall include, but is not limited to the best practices described under 40 CFR 60.482-7(e).

[18 AAC 50.040(a)(1), (a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-7(b), (c)(2), (d) & (e) & 60.482-9, Subpart VV, 7/1/01]
[40 CFR 60.485(b), Subpart VV, 7/1/01]

Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors (40 CFR 60.482-8)

35. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, the Permittee shall monitor within 5 days the pumps and valves in heavy liquid service, pressure relief devices in light or heavy liquid service, and flanges and other connectors in accordance with 40 CFR 60.485(b) using Method 21 (40 CFR 60, Appendix A-7) to determine the presence of leaking sources. Method 21 monitoring is not required if the Permittee assumes that a leak would be detected by such monitoring and proceeds with leak repairs per conditions 35.1 and 35.2.

[40 CFR 60.632(a) & (d), Subpart KKK, 7/1/01]
[40 CFR 60.482-8(a), and 60.485(b), Subpart VV, 7/1/01]

35.1 When a leak is detected[9], leak repairs shall be completed as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

[40 CFR 60.482-8(b), 60.482-8(c)(1) & 60.482-9, Subpart VV, 7/1/01]

35.2 The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. This shall include, but is not limited to, the best practices described under 40 CFR 60.482-7(e).

[40 CFR 60.482-8(c)(2) & (d) & 60.482-7(e), Subpart VV, 7/1/01]

Closed Vent Systems and Control Devices (40 CFR 60.482-10)

[8] A leak is defined for this condition as any Method 21 reading of 10,000 ppm or greater [ref. 40 CFR 60.482-7(b)], or any evidence of a leak that the Permittee considers a leak.
[9] A leak is defined for this condition as any Method 21 reading of 10,000 ppm or greater [ref. 40 CFR 60.482-8(b)], or any evidence of a leak that the Permittee considers a leak.

36. Closed vent systems and control devices (Source IDs 19 through 23) used to comply with 40 CFR 60.482-10 (pressure relief devices which vent to the flare header or closed systems) shall be operated at all times when emissions may be vented to them. Source IDs 19 through 23 shall be designed and operated to comply with 40 CFR 60.18, as stated in condition 22.

[18 AAC 50.040(a)(1), (a)(2)(Z) & (DD), 8/15/02]
[40 CFR 60.18(e), Subpart A, 7/1/01]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-10, Subpart VV, 7/1/01]

36.1 The Permittee shall monitor the control devices (Source IDs 19 through 23) to ensure that they are operated and maintained in conformance with their designs.

[40 CFR 60.18(d), Subpart A, 7/1/01]
[40 CFR 60.632(a), Subpart KKK, 7/1/01]
[40 CFR 60.482-10(e), Subpart VV, 7/1/01]

36.2 For each closed vent system used to comply with applicable provisions of 40 CFR 60.482-10, conduct an initial inspection in accordance with 40 CFR 60.485(b) using Method 21 (40 CFR 60, Appendix A-7) to determine the presence of leaks. The Method 21 instrument shall be calibrated in accordance with 40 CFR 60.485(b)(1).

[40 CFR 60.482-10(f)(1)(i), Subpart VV, 7/1/01]
[40 CFR 60.485(b), Subpart VV, 7/1/01]

36.3 For each closed vent system used to comply with applicable provisions of 40 CFR 60.482-10, conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

[40 CFR 60.482-10(f)(1)(ii), Subpart VV, 7/1/01]

36.4 When a leak is detected[10], perform leak repair procedures as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

[40 CFR 60.482-10(g)(2) & 60.482-9, Subpart VV, 7/1/01]

36.5 The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

[40 CFR 60.482-10(g)(1), Subpart VV, 7/1/01]

Recordkeeping

37. The Permittee shall comply with the following recordkeeping requirements:

[18 AAC 50.350(h), 5/3/02]
[40 CFR 60.635(a), Subpart KKK, 7/1/01]
[40 CFR 60.486, Subpart VV, 7/1/01]

[10] A leak is defined for this condition as any Method 21 reading of 500 ppm or greater above background [ref. 40 CFR 60.482-10(g)], or any evidence of a leak that the Permittee considers a leak.

37.1 When a leak is detected as specified by conditions 29, 30.2, 32.2, 34, or 35.1 a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in condition 34 and no leak has been detected during those 2 months. The identification on equipment except a valve, may be removed until after it has been repaired.

37.2 For each leak detected as specified by condition 29, 30.2, 32.2, 34, or 35.1, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location:

[40 CFR 60.635(a) & (b), Subpart KKK, 7/1/01]
[40 CFR 60.486(b) & (c), Subpart VV, 7/1/01]

a. The instrument and operator identification numbers and the equipment identification numbers;

b. The date the leak was detected and the dates of each attempt to repair the leak;

c. Repair methods applied in each attempt to repair the leak;

d. "Above 10,000 ppm" if the maximum instrument reading measured by Method 21 after each repair attempt is equal to or greater than 10,000 ppm;

e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;

f. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown;

g. The expected date of successful repair of the leak if a leak is not repaired within 15 days;

h. Dates of process unit shutdown that occur while the equipment is unrepaired; and

i. The date of successful repair of the leak.

37.3 The following information pertaining to the design requirements for closed vent systems and control devices described in conditions 30 and 36 shall be recorded and kept in a readily accessible location:

[40 CFR 60.635(a), Subpart KKK, 7/1/01]
[40 CFR 60.486(d), Subpart VV, 7/1/01]

a. Detailed schematics, design specifications, and piping and instrumentation diagrams;

b. The dates and descriptions of any changes in the design specifications;

c. A description of the parameter(s) monitored, as required in condition 36.1, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter(s) was selected for the monitoring;

d. Periods when the closed vent systems and control devices required in conditions 30 and 36 are not operated as designed, including periods when a flare pilot light in any of Source ID(s) 19 through 23 does not have a flame; and

e. Dates of startups and shutdowns of the closed vent systems and control devices required in conditions 30 and 36.

37.4 The following information shall be recorded in a log that is kept in a readily accessible location:

[40 CFR 60.635(a), Subpart KKK, 7/1/01]
[40 CFR 60.486(e) & (j), Subpart VV, 7/1/01]

a. A list of identification numbers for equipment subject to the applicable requirements of NSPS Subpart KKK (§§60.482-2, 60.482-3, 60.482-4, 60.482-6, 60.482-7, 60.482-8, and 60.482-10) as stated in conditions 29, 30, 31, 33, 34, 35, and 36;

b. A list of equipment identification numbers for pressure relief devices required to comply with §60.482-4, as stated in condition 31;

c. The dates of each compliance test as required in §60.482-4, as stated in condition 31.2;

d. The background level measured during each compliance test conducted per condition 31.2;

e. The maximum instrument reading measured at the equipment during each compliance test conducted per condition 31.2;

f. A list of identification numbers for equipment in vacuum service; and

g. Information and data used to demonstrate that a piece of equipment is not in VOC service.

Reporting

38. The Permittee shall submit to EPA and the Department semi-annual reports. The reports shall cover the periods January through June and July through December. The reports shall include the following:

[18 AAC 50.350(i), 5/3/02]
[40 CFR 60.636, Subpart KKK, 7/1/01]
[40 CFR 60.487(c), Subpart VV, 7/1/01]

a. Process unit identification;

b. For each month during the semi-annual reporting period,

(i) number of valves for which leaks were detected as described in condition 34;

(ii) number of valves for which leaks were not repaired as required in condition 34.1;

(iii) number of pumps for which leaks were detected as described in condition 29;

(iv) number of pumps for which leaks were not repaired as required in condition 29.1;

(v) number of compressors for which leaks were detected as described in condition 30.2;

(vi) number of compressors for which leaks were not repaired as required in condition 30.2;

(vii) an explanation of each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible;

(viii) number of pressure relief devices for which leaks were detected as described in condition 32.2;

(ix) number of pressure relief devices for which leaks were not repaired as required in conditions 32.2 and 32.3;

c. Dates of process unit shutdowns which occurred within the semi-annual reporting period; and

d. Revisions to items reported in the initial semi-annual report if changes have occurred since the initial report or subsequent revisions to the initial report.

Section 6. Visible Emissions and PM Monitoring, Recordkeeping and Reporting

Liquid Fuel-Fired Sources (Source ID(s) 15 through 18)

39. Visible Emissions Monitoring. The Permittee shall observe the exhaust of Source ID(s) 15 through 18 for visible emissions using the Method 9 Plan under condition 39.

39.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. First Method 9 Observation. For Source ID(s) 15 through 18, observe exhaust for 18 minutes within six months after the effective date of this permit.

b. Second Method 9 Observation. Observe exhaust while firing on liquid fuel per condition 39.1 within 30 days after the end of a calendar month in which the cumulative hours of operation on liquid fuel for the past 12 consecutive months exceed 400, except when an 18-minute Method 9 observation has already been conducted in accordance with condition 39.1 in the same 12 consecutive month period and the source appears to not have excess visible emissions while in operation on liquid fuel.

c. Third Method 9 Observation. Observe exhaust while firing on liquid fuel per condition 39.1 within 30 days after the end of a calendar month in which the cumulative hours of operation on liquid fuel for the past 12 consecutive month period exceed 800.

d. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to at least monthly intervals, until a six-minute average opacity observed during the most recent set of observations is not greater than 15 percent or no more than one observation is greater than 20 percent.

[18 AAC 50.350(f)(4), 1/18/97; 18 AAC 50.350(g) & 50.346(c), 5/3/02]

40. Visible Emissions Recordkeeping. The Permittee shall keep records in accordance with this condition.

[18 AAC 50.350(h) & 50.346(c), 5/3/02]

40.1 When conducting the Method 9 observations of condition 39

a. the observer shall record

(i) the name of the facility, emissions source and location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 15;

(ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;

(iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in Section 15, and

(v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;

b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;

c. calculate and record the highest 18-consecutive-minute average observed.

41. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.350(i) & 50.346(c), 5/3/02]

41.1 include in each facility operating report under condition 83

a. copies of the observation results (i.e. opacity observations), except for the observations the Permittee has already supplied to the Department;

b. a summary to include:

(i) number of days observations were made;

(ii) highest six-minute average observed; and

(iii) dates when one or more observed six-minute averages were greater than 20 percent;

c. a summary of any monitoring or recordkeeping required under conditions 39 and 40 that was not done;

41.2 report under condition 81:

a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and

b. if any monitoring under condition 39 was not performed when required.

42. Particulate Matter Monitoring for Liquid Fuel-Fired Engines. The Permittee shall conduct source tests on liquid fuel-fired engines, Source ID(s) 15 through 18, to determine the concentration of particulate matter (PM) in the exhaust of a source in accordance with the following.

[18 AAC 50.350(g) & 50.346(c), 5/3/02]

42.1 Except as provided in condition 42.4,within six months of exceeding the criteria of condition 42.2a or 42.2b, either

a. conduct a PM source test according to requirements set out in Section 11; or

b. make repairs so that emissions no longer exceed the criteria of condition 42.2; to show that emissions are below those criteria, observe emissions as described in condition 39.1 under load conditions comparable to those when the criteria were exceeded.

42.2 Conduct the test according to condition 42.1 if

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent, or

b. for a source with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

42.3 During each one-hour PM source test run, observe the exhaust for 18 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

42.4 The automatic PM source test requirement in conditions 42.1 and 42.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

43. Particulate Matter Recordkeeping for Liquid Fuel-Fired Engines. Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter(s) of Source ID(s) 15 through 18. Report the stack diameter(s) in the next facility operating report under condition 83.

[18 AAC 50.350(h) & 50.346(c), 5/3/02]

44. Particulate Matter Reporting for Liquid Fuel-Fired Engines. The Permittee shall report as follows:

[18 AAC 50.350(i) & 50.346(c), 5/3/02]

44.1 report under condition 81

a. the results of any PM source test that exceeds the PM emissions limit; or

b. if one of the criteria of condition 42.2 was exceeded and the Permittee did not comply with either condition 42.1a or 42.1b;

44.2 report observations in excess of the threshold of condition 42.2b within 30 days of the end of the month in which the observations occur;

44.3 in each facility operating report under condition 83, include

a. the dates, Source ID(s), and results when an observed 18-minute average was greater than an applicable threshold in condition 42.2;

b. a summary of the results of any PM testing under condition 42; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 42.2, if they were not already submitted.

Flares (Source ID(s) 19 through 23)

45. Visible Emissions Monitoring, Recordkeeping, and Reporting. The Permittee shall observe the first six daylight flare events[11] occurring during the life of this permit[12].

45.1 Monitor flare events using Method-9 for 18 minutes to obtain 72 individual 15-second readings.

45.2 Record the following information for observed events:

a. the flare(s) Source ID number;

b. results of the Method-9 observations;

c. reason(s) for flaring;

d. date, beginning and ending time of event; and

e. cumulative volume of gas flared.

[11] For purposes of this permit, a "flare event" is flaring of gas for greater than one hour as a result of scheduled release operations, i.e. maintenance or well testing activities. It does not include non-scheduled release operations, i.e. process upsets, emergency flaring, or de minimis venting of gas incidental to normal operations.

[12] Flare events monitored within 12-months prior to permit effective date may count towards the six-event total.

45.3 Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. Until monitoring has been completed on the six flare events described in this condition, the Permittee shall either monitor each qualifying flare event or include in the next facility operating report required by condition 83 an explanation of the reason the event was not monitored.

45.4 Attach copies of the records required by condition 45.2 with the facility operating report required by condition 83.

45.5 Report under condition 81 whenever the opacity standard in condition 3 is exceeded.

[18 AAC 50.350(g) – (i), 5/3/02]

Section 7. Facility-Wide Requirements

46. **NESHAPs Subpart A, Applicability Determinations**. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures described in 40 CFR 63.1(b). If a source becomes affected by an applicable subpart of 40 CFR 63, Permittee shall achieve compliance with applicable provisions by the date established by the Administrator in the applicable subpart.

46.1 **NESHAPS Subpart A, Recordkeeping.** The Permittee shall maintain records in accordance with §63.10(b)(3).

[40 C.F.R. 63.1(b), 63.6(c)(1) & 63.10(b)(3), 4/5/02]
[18 AAC 50.350(h), 5/3/02; 18 AAC 50.040(c)(1)(A) & (E), 8/15/02]

Halon Prohibitions, 40 CFR 82

47. **Significant New Alternatives Policy Program.** The Permittee shall comply with the prohibitions set out in 40 CFR 82.174(b) through (d) (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program) pertaining to substitute products for ozone-depleting compounds. Monitoring shall consist of an annual certification that the Permittee complies with these prohibitions.

[18 AAC 50.040(d), 8/15/02]
[40 CFR 82.174 (b) - (d), 7/1/01]

48. **Halon Emissions Reduction.** The Permittee shall comply with the prohibitions set out in 40 CFR 82.270(b) through (f) (Protection of Stratospheric Ozone Subpart H – Halon Emissions Reduction). Monitoring shall consist of an annual certification that the Permittee complies with these prohibitions.

[18 AAC 50.040(d), 8/15/02]
[40 CFR 82.270 (b)-(f), 7/1/01]

Section 8. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant sources that the Department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to these sources.

49. For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

49.1 The Permittee shall submit the compliance certifications of condition 84 based on reasonable inquiry;

49.2 The Permittee shall comply with the requirements of condition 63;

49.3 The Permittee shall report in the facility operating report required by condition 83 if a source listed in this condition 49, because of historical actual emissions less than the thresholds of 18 AAC 50.335(r), has current actual emissions greater than any of those thresholds set out in 18 AAC 50.335(r).

49.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

50. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by either

50.1 more than 20% for more than three minutes in any one hour[13], or

[18 AAC 50.055(a)(1), 1/18/97, 40 C.F.R. 52.70, 7/1/01]

50.2 more than 20% averaged over any six consecutive minutes[1]

[18 AAC 50.055(a)(1), 5/3/02]

51. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

52. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

[13] See Footnote 1.
[14] See Footnote 2.

Section 9. Compliance Plan

As set out in 18 AAC 50.350(k)(5), the compliance plan and schedule included in this Operating Permit do not provide the shield of AS 46.14.290 and do not prevent the Department from pursuing an enforcement action.

Flare Exit Velocity Determination (40 CFR 60.18(f)(4) and §60.485(g)(7))

The facility is not in compliance with 40 C.F.R. 60.18(c)(4), §60.18(f)(4), §60.482-10(d), §60.485(g)(7), and §60.633(g) solely because the Permittee has varied from the reference methods specified in 40 C.F.R. 60.18(f)(4) and §60.485(g)(7) when determining the actual exit velocity of Source ID(s) 19 through 23. Permittee believes the alternative methods used to determine the exit velocity of the flares are accurate and that the reference methods are not appropriate for the CGF flares given the actual flow conditions at the facility.

53. Establish compliance with the requirement to determine flare exit velocity as follows:

53.1 Within two years of the effective date of the permit, obtain approval from EPA for use of proposed alternative methods for determining the actual exit velocity of Source ID(s) 19 through 23, or

53.2 Determine the actual exit velocity of Source ID(s) 19 through 23 using a method approved by EPA.

53.3 Every six months from the effective date of the permit submit to the Department a certified progress report on the status of satisfying this condition.

53.4 The report shall include a schedule for accomplishing condition 53.2 assuming EPA fails to grant approval of alternative methods per condition 53.1.

53.5 The report shall include an estimated date for accomplishing condition 53.

[18 AAC 50.350(k), 1/18/97]

Flare Pilot Monitoring (40 CFR 60.18(f)(2) and §60.485(g)(2))

The facility is not in compliance with 40 C.F.R. 60.18(c)(2), §60.18(f)(2), §60.482-10(d), §60.485(g)(2), and §60.633(g) solely because the Permittee has not yet obtained concurrence from EPA that the method used to monitor the presence of a pilot flame in Source ID(s) 19 through 23 is equivalent to a thermocouple. Permittee believes the alternative method used to monitor the presence of a pilot flame at CGF meets the intent of the rules and that the use of thermocouples is not feasible at the facility.

54. Establish compliance with the requirement to monitor the presence of a flare pilot flame as follows:

54.1 Within two years of the effective date of the permit, obtain approval from EPA for use of the proposed alternative method for monitoring the presence of a pilot flame for Source ID(s) 19 through 23, or

54.2 Monitor the presence of a pilot flame for Source ID(s) 19 through 23 using an EPA-approved equivalent device.

54.3 Every six months from the effective date of the permit submit to the Department a certified progress report on the status of satisfying this condition.

54.4 The report shall include a schedule for accomplishing condition 54.2 assuming EPA fails to grant approval of alternative methods per condition 54.1.

54.5 The report shall include an estimated date for accomplishing condition 54.

[18 AAC 50.350(k), 1/18/97]

Oil and Natural Gas MACT Applicability (40 CFR 63 Subpart HH)

The applicability of 40 C.F.R. 63 Subpart HH to the Central Gas Facility is uncertain at this time. Permittee believes that the facility qualifies for the "black oil" exemption stated in 40 C.F.R. 63.760(e) and/or that all liquid and gas streams serviced by compressors and ancillary equipment at the Central Gas Facility have a total volatile HAP concentration less than 10 percent by weight.

55. Within one year of the effective date of the permit, obtain a regulatory determination from EPA regarding the applicability of 40 C.F.R. 63 Subpart HH to the Central Gas Facility.

55.1 If any provisions of 40 C.F.R. 63 Subpart HH and/or 40 C.F.R. 63 Subpart A are found to be applicable to the facility, then comply with the applicable provisions of the standard in accordance with condition 92.

55.2 Every six months from the effective date of the permit submit to the Department a certified progress report on the status of satisfying conditions 55 and 55.1, and include an estimated date for fulfilling these conditions.

[18 AAC 50.350(k), 1/18/97]

Section 10. Generally Applicable Requirements

56. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145 and 61.150 of Subpart M and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 8/15/02 & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 61, Subparts A & M, and Appendix A, 7/1/01]

57. Refrigerant Recycling and Disposal. The Permittee shall comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F. Applicable requirements include 40 CFR 82.154, 82.156, 82.161, 82.162, and 82.166.

[18 AAC 50.040(d), 8/15/02 & 18 AAC 50.350(d)(1), 1/18/97]
[40 C.F.R. 82, Subpart F, 7/1/01]

58. Good Air Pollution Control Practice. The Permittee shall do the following for Source ID(s) 15 through 18, and 24 and 25:

a. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

b. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;

c. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030 & 50.346(b)(2), 5/3/02 & 18 AAC 50.350(f)(2) & (3), 1/18/97]

59. Dilution. The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

60. Reasonable Precautions to Prevent Fugitive Dust. The Permittee shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air when causing or permitting bulk materials to be handled, transported, or stored, or when engaging in an industrial activity or construction project. Monitoring shall consist of an annual certification that reasonable precautions were taken.

[18 AAC 50.346(c), 5/3/02; 18 AAC 50.045(d) & 50.335(g), 1/18/97 & 18 AAC 50.040(e), 7/2/00]

61. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November [illegible]982, unless approved in writing by the Department. Monitoring shall consist of an annual certification that the Permittee does not conduct stack injection at the facility.

[18 AAC 50.055(g), 5/3/02]

62. Open Burning. The Permittee shall conduct any open burning at the facility in accordance with the requirements of 18 AAC 50.065. Monitoring shall consist of an annual certification that any open burning complied with 18 AAC 50.065.

[18 AAC 50.040(e), 8/15/02, 18 AAC 50.065, 7/21/01, 18 AAC 50.350(d)(1), 1/18/97]

63. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.346(a)(2), 5/3/02; 18 AAC 50.110, 5/26/72; 18 AAC 50.040(e), 8/15/02]

63.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 81.

63.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 63.

63.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 63; or

b. the Department notifies the Permittee that it has found a violation of condition 63.

63.4 The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 63; and

d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

63.5 With each facility operating report required under condition 83, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

63.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.350(g) - (i) & 50.346(a)(2), 5/3/02]

64. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard[15], the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under condition 81 requires information on the steps taken to minimize emissions. The report required under condition 81 is adequate monitoring for compliance under this condition.

[18 AAC 50.235(a) & 50.350(f)(3), 1/18/97]

65. HAP Reconstruction. Before replacing components of either a "major source" as that term is defined in 40 C.F.R. 63.2 or a source that would become a "major source" as a result of replacement, where the cost of replacement exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source, but does not exceed 50 ent of the fixed capital cost that w be required to construct the entire facility, the Permittee shall obtain written approval from the Department:

65.1 under 40 C.F.R. 63.5(b)(3), (d), and (e), if the source is subject to an emission standard of 40 C.F.R. 63, adopted by reference in 18 AAC 50.040(c)(1)(C), or

65.2 in a Notice of MACT Approval under 40 C.F.R. 63.43(f) – (h), if the source is subject to 40 C.F.R. 63.43(a), each adopted in reference by 18 AAC 50.040(c).

[18 AAC 50.346(d), 5/3/02]

66. Permit Renewal. To renew this permit, the Permittee shall submit an application under 18 AAC 50.335 no sooner than **March 3, 2007** and no later than **March 3, 2008.**

[18 AAC 50.335(a), 1/18/97]

[15] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 11. General Source Testing and Monitoring Requirements

67. Requested Source Tests. In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 1/18/97 & 18 AAC 50.345(a) & (k), 5/3/02]

68. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b), 1/18/97 & 18 AAC 50.350(g), 5/3/02]

68.1 at a point or points that characterize the actual discharge into the ambient air; and

68.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

69. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

69.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A), 1/18/97; 18 AAC 50.350(g), 5/3/02; & 18 AAC 50.040(a), 8/15/02]
[40 C.F.R. 60, 7/1/01]

69.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 8/15/02, 18 AAC 50.220(c)(1)(B) & 50.350(g), 5/3/02]
[40 C.F.R. 61, 7/1/01]

69.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 8/15/02, 18 AAC 50.220(c)(1)(C), 1/18/97, 18 AAC 50.350(g), 5/3/02]
[40 C.F.R. 63, 4/5/02]

69.4 Source testing for reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9.

[18 AAC 50.030, 5/3/02, 18 AAC 50.220(c)(1)(D), 1/18/97 & 18 AAC 50.350(g), 5/3/02]

69.5 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 8/15/02 & 18 AAC 50.220(c)(1)(E), 1/18/97, 18 AAC 50.350(g), 5/3/02]
[40 C.F.R. 60, Appendix A, 7/1/01]

69.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Method 201.

[`18 AAC 50.035(b)(2), 8/15/02; 18 AAC 50.220(c)(1)(F), 1/18/97, 18 AAC 50.350(g), 5/3/02]
[40 C.F.R. 51, Appendix M, 7/1/99]

69.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(19), 8/15/02 & 18 AAC 50.220(c)(2), 1/18/97, 18 AAC 50.350(g), 5/3/02]
[40 C.F.R. 63, Appendix A, Method 301, 4/5/02]

70. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 1/18/97, 18 AAC 50.350(g) & 18 AAC 50.990(88), 5/3/02]

71. Test Exemption. The Permittee is not required to comply with conditions 73, 74 and 75 when the exhaust is observed for visible emissions.

[18 AAC 50.345(a), 5/3/02]

72. Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 5/3/02]

73. Test Plans. Except as provided in condition 71, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 67 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 5/3/02]

74. Test Notification. Except as provided in condition 71, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 5/3/02]

75. Test Reports. Except as provided in condition 71, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 77. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o), 5/3/02]

76. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in conditions 4 and 51, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f), 1/18/97, 18 AAC 50.350(g), 5/3/02]

Section 12. General Recordkeeping, Reporting, and Compliance Certification Requirements

77. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.205 and 50.350(b)(3) & (j), 1/18/97; and 18 AAC 50.345(a) & (j), 5/3/02]

78. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 77.

[18 AAC 50.350(i), 5/3/02]

79. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200 & 50.350(b)(3), 1/18/97; and 18 AAC 50.345(a) & (i), 5/3/02 & 18 AAC 50.350(g) – (i), 5/3/02]

80. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.350(h), 5/3/02]
[40 CFR 60.49b(o), Subpart Db, and 40 CFR 60.7(f), Subpart A, 7/1/01]

80.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

80.2 records of all monitoring required by this permit, and information about the monitoring including:

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

81. Excess Emissions and Permit Deviation Reports.

81.1 Except as provided in condition 63, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 81.1c(ii) and 81.1c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under condition 81.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

81.2 When reporting excess emissions, the Permittee must report using either the Department's on-line form, which can be found at http://www.state.ak.us/dec/dawq/aqm/eeform.pdf, or if the Permittee prefers, the form contained in Section 18 of this permit. The Permittee must provide all information called for by the form that is used.

81.3 When reporting a permit deviation, the Permittee must report using either the Department's on-line form, which can be found at http://www.state.ak.us/dec/dawq/aqm/eeform.pdf, or if the Permittee prefers, the form contained in Section 18 of this permit. The Permittee must provide all information called for by the form.

81.4 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2) & 50.240(c), 1/18/97; 18 AAC 50.350(i), 5/3/02; and 18 AAC 50.346(a)(3), 5/3/02

82. NSPS and NESHAP Reports. The Permittee shall:

[18 AAC 50.040, 8/15/02 & 18 AAC 50.350(i)(2), 1/18/97; and 40 C.F.R. 60 & 61, 7/1/01]

82.1 attach to the facility operating report required by condition 83, copies of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10, unless copies have already been provided to the Department at the time submitted to EPA, and

82.2 upon request by the Department provide a copy of any EPA-granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

83. Operating Reports. During the life of this permit, the Permittee shall submit to the Department an original and two copies of an operating report by April 30 for the period January 1 to March 31, by July 30 for the period April 1 to June 30, by October 30 for the period July 1 to September 30, and by February 14 for the period October 1 to December 31 of the previous year.

83.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

83.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 83.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under condition 81 the Permittee may cite the date or dates of those reports.

83.3 The operating report must include a listing of visible emissions monitored under condition 39 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report

a. the date that additional monitoring or testing was triggered;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(3) & 50.350(j), 5/3/02, 18 AAC 50.350(d)(4), 6/21/98, and 18 AAC 50.350(f)(3), 1/18/97]

84. Annual Compliance Certification. Each year by March 31, and for reporting periods following the effective date of this permit the Permittee shall compile and submit to the Department an original and two copies of an annual compliance certification report as follows:

[18 AAC 50.350(j), 1/18/97]

84.1 For each permit term and condition set forth in Section 4 through Section 12, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 6/21/98]

a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;

b. state whether compliance is intermittent or continuous;

c. briefly describe each method used to determine the compliance status; and

d. notarize the responsible official's signature.

[18 AAC 50.205, 1/18/97 & 50.345(a) & (j), 5/3/02]

84.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 13. Standard Conditions Not Otherwise Included in the Permit

85. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

85.1 an enforcement action;

85.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

85.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (c), 5/3/02]

86. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (d), 5/3/02]

87. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (e), 5/3/02]

88. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

88.1 included and specifically identified in the permit; or

88.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (b), 5/3/02]

89. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (f), 5/3/02]

90. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (g), 5/3/02]

91. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

91.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

91.2 have access to and copy any records required by the permit;

91.3 inspect any facility, equipment, practices, or operations regulated by or referenced in the permit; and

91.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (h), 5/3/02]

Section 14. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the Department not to be applicable to the Central Gas Facility.

92. Table 5 identifies the sources that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table 5 becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, and obtaining a construction permit and/or an operating permit revision, if necessary.

Table 5 - Permit Shields Granted.

Requirements Not Applicable	Basis for Non-Applicability
All Group II - Gas-Fired Heaters	
40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units §60.42b - Standard for sulfur dioxide	Units fired only on natural gas are exempt from these provisions.
§60.43b - Standard for Particulate Matter	
§60.44b(b) - (g) - Standard for Nitrogen Oxides	
§60.44b(j) & (k)	Units are not subject to a Federally enforceable requirement limiting operation to a combined annual capacity factor of 10 percent or less [ref. 40 CFR 60.44b(j)(3)]
§6.44b(l)	Units commenced construction, modification, and reconstruction prior to July 9, 1997.
§60.45b - Compliance and Performance Test Methods and Procedures for Sulfur Dioxide	Applies only to units subject to provisions of 60.42b.
§60.46b(a),(b), (d) - Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	Applies only to units subject to provisions of 60.43b.
§60.46b(c) - Performance Test §60.46b(e)(1) - Initial Compliance Test	Obsolete requirement - completed as required.
§60.46b(e)(2), (e)(5)	Applies only to units fired on coal or residual oil.
§60.46b(e)(3)	Applies only to units with a heat input capacity greater than 250 MMBtu/hr.
§60.46b(f)	Applies only to units with duct burners used in combined cycle systems.
§60.46b(g)	Applies only to units meeting the criteria outlined in §60.44b(j) or 60.44b(k).
§60.46b(h)	Applies only to units subject to §60.44b(j) with a heat input capacity greater than 250 MMBtu/hr.
§60.47b - Emission Monitoring for Sulfur Dioxide	Applies only to units subject to provisions of 60.42b.
§60.48b(a) - Emission Monitoring for Particulate Matter and Nitrogen Oxides	Applies only to units subject to provisions of 60.43b.
§60.49b(a) & (b) - Reporting and Recordkeeping Requirements (Initial Notification and Testing)	Obsolete requirement - completed as required.
§60.49b(e)	Applies only to units fired on residual oil.

Requirements Not Applicable	Basis for Non-Applicability
§60.49b(f) & (h)(3)	Applies only to units subject to provisions of 60.43b.
§60.49b(g)(10) - Reporting and Recordkeeping Requirements 40 CFR 60 Appendix F	The CEMS is not used to determine compliance on a continuous basis. [ref. 40 CFR 60.46b(e)(4)]
§60.49b(j), (m), & (r)	Applies only to units subject to provisions of 60.42b.
§60.49b(k), (l), & (n)	Applies only to units subject to provisions of 60.45b.
§60.49b(p) & (q)	Applies only to units subject to provisions of 60.44b(j) or (k).
40 CFR 60 Subpart A - General Provisions §60.7(a)(1), (2) & (3) - Notification and Recordkeeping (Initial Notification) §60.8(a) - Performance Test (Initial Performance Test Only)	Obsolete requirements - completed as required.
§60.7(a)(4) - Notification and Recordkeeping	This requirement only applies to "existing facilities", as defined in 40 CFR 60.2.
40 CFR 60 Subpart D - Standards of Performance for Fossil Fuel-Fired Steam Generators	Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Fossil-Fuel-Fired Steam Generators*, as defined in subpart.
40 CFR 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units	Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Electric Utility Steam Generating Units*, as defined in subpart.
40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Heat input capacities exceed threshold (100 MMBtu/hr); and commenced construction prior to effective date of subpart (6/9/89).
All Storage Tanks	
40 CFR 60 Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction after effective date of subpart (5/19/78) and not storing a petroleum liquid.
40 CFR 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction after effective dates of subpart (5/18/78 - 7/23/84) and not storing a petroleum liquid.
Storage Tank 19-1901	

Requirements Not Applicable	Basis for Non-Applicability
40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Vessel not storing a *volatile organic liquid (VOL)*, as defined in subpart; and vapor pressure of stored liquid below thresholds.
Storage Tanks: 19-1902 and 19-1905	
40 CFR 60 Subpart Kb §60.112b - Standards for volatile organic compounds (VOCs)	19-1902: Except as specified in paragraphs (a) and (b) of §60.116b, vessels with a capacity >151 m^3 storing a liquid with a maximum true vapor pressure < 3.5 kPa (0.5 psia) are exempt from General Provisions - Subpart A, and from the provisions of Subpart Kb. 19-1905: Except as specified in paragraphs (a) and (b) of §60.116b, vessels with a capacity greater than or equal to 75 m^3 but < 151 m^3 storing a liquid with a maximum true vapor pressure < 15 kPa (2.2 psia) are exempt from General Provisions - Subpart A, and from the provisions of Subpart Kb.
§60.113b - Testing and procedures	
§60.114b - Alternative means of emission limitation	
§60.115b - Reporting and recordkeeping	
§60.116b(c) - (g) - Monitoring of operations	
40 CFR 60 Subpart A - General Provisions	
All Group I - Gas Turbines	
40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines §60.332(a)(1) - Standards for NO_X	Standard applies to *Electric Utility Stationary Gas Turbines*, as defined in subpart. Source is not an Electric Utility Stationary Gas Turbine as defined in Subpart GG.
§60.334(a) - Monitoring of Operations §60.335(c)(2) - Test Methods and Procedures	Applies only to affected turbines equipped with water injection to control emissions of NO_X. Source is not equipped with water injection to control emissions of NO_X.
40 CFR 60 Subpart GG §60.334(b) - Monitoring of Operations (Fuel Nitrogen Only) §60.335(a) - Test Methods and Procedures	EPA Region X waived fuel-bound nitrogen monitoring for NSPS affected stationary gas turbines located in the Prudhoe Bay Eastern Operating Area (ref. correspondence dated August 19, 1996).
40 CFR 60 Subpart A - General Provisions §60.7(a)(1), (2) & (3) - Notification and Recordkeeping (Initial Notification)	Obsolete requirements - completed as required.
§60.7(a)(4) - Notification and Recordkeeping	This requirement only applies to "existing facilities", as defined in 40 CFR 60.2.
Group I - Gas Turbines: NGI-19-1801, NGI-19-1802, NGI-19-1805, NGI-19-1855, NGI-19-1806, NGI-19-1856, and NGI-19-1857	
§60.8(a) - Performance Test (Initial Performance Test Only) §60.335(b), (c)(1), (c)(3) - Test Methods and Procedures	Obsolete requirements - completed as required.
Group I - Gas Turbines: NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886	

Requirements Not Applicable	Basis for Non-Applicability
40 CFR 60 Subpart GG §60.332(a)(2) - Standards for NO_X	Stationary gas turbines with a manufacturers rated base load at ISO conditions of greater than 30 MW are exempt from §60.332(a)(2) [§60.332(d)]. The GE Frame 6 turbines in operation at CGF exceed 30 MW (base load at ISO conditions).
Natural Gas Processing Plant - NGL Plant	
40 CFR 60 Subpart KKK - Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants [Subpart VV Standards of Performance for Equipment Leaks of VOC in SOCMI Industry (Incorporated by Reference)] §60.482-2(a)(1) - Standards: Pumps in Light Liquid Service §60.482-7(a), (c)(1) - Standards: Valves in Gas/Vapor Service and Light Liquid Service §60.633(b)(1) - Exceptions	Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located on the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2(a)(1), 60.482-7(a), 60.482-7(c)(1), and 60.633(b)(1). [ref. 40 CFR 60.633(e)]
§60.482-5 - Standards: Sampling Connection Systems	Sampling connection systems are exempt from the requirements of §60.482-5. [ref. 40 CFR 60.633(c)]
40 CFR 60 Subpart KKK 40 CFR 60 Subpart A - General Provisions §60.7(a)(1), (2) & (3) - Notification and Recordkeeping (Initial Notification)	Obsolete requirement - completed as required.
§60.7(a)(4) - Notification and Recordkeeping	This requirement only applies to "existing facilities", as defined in 40 CFR 60.2.
§60.7(b), (c), & (d) - Notification and Recordkeeping	The requirements of §60.7 (b), (c), & (d) do not apply to affected facilities subject to 40 CFR 60 Subpart VV [§60.486(k)] (incorporated by reference in 40 CFR 60 Subpart KKK).
Group IV – Flares	
40 CFR 60 Subpart KKK 40 CFR 60 Subpart A - General Provisions §§60.18(c)(5), (f)(6) - General Control Device Requirements: Exit Velocity Requirements for Air-assisted flares	The flares at this facility are not air assisted. They are considered non-assisted flares.
Facility-Wide	
40 CFR 60 Subpart J - Standards of Performance for Petroleum Refineries	Facility does not meet the definition for a petroleum refinery.
40 CFR 60 Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries	Facility does not meet the definition for a petroleum refinery.
40 CFR 60 Subpart QQQ - Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems	Facility does not meet the definition for a petroleum refinery.
Facility-Wide - Natural Gas Processing Plant	

Requirements Not Applicable	Basis for Non-Applicability
40 CFR 60 Subpart LLL - Standards of Performance for Onshore Natural Gas Processing Plants: SO_2 Emissions	Facility does not operate natural gas sweetening unit(s).
Facility-Wide	
40 CFR 61 Subpart E - National Emission Standards for Mercury	Facility does not operate incinerators.
40 CFR 61 Subpart M - National Emission Standard for Asbestos §61.142 - Standard for Asbestos Mills	Facility is not an Asbestos Mill.
§61.143 - Standard for Roadways	Facility roadways not exposed to asbestos tailings or asbestos containing waste.
§61.144 - Standard for Manufacturing	Facility does not engage in any manufacturing operations using commercial asbestos.
§61.146 - Standard for Spraying	Facility does not spray apply asbestos containing materials.
§61.147 - Standard for Fabricating	Facility does not engage in any fabricating operations using commercial asbestos.
§61.148 - Standard for Insulating Materials	Facility does not install or reinstall, on any facility component, insulation material containing commercial asbestos.
§61.149 - Standard for Waste Disposal for Asbestos Mills	Applies only to those facilities subject to §61.142 (Asbestos Mills).
§61.151 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Applies only to those facilities subject to §§61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing or fabricating).
§61.152 - Standard for Air-Cleaning	Facility does not use air cleaning equipment.
§61.153 - Standard for Reporting	No reporting requirements apply for sources subject to §61.145 (demolition and renovation) [ref. §61.153(a)].
§61.154 - Standard for Active Waste Disposal Sites	Facility not an active waste disposal site and does not receive asbestos containing waste material.
§61.155 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Facility does not process regulated asbestos containing material (RACM).
Activities subject to 40 CFR 61 Subpart M - Standard for Demolition and Renovation (§61.145)	
40 CFR 61 Subpart A - General Provisions §61.05(a) - Prohibited Activities §61.07 - Application for Approval of Construction or Modification §61.09 - Notification of Startup	Owners or operators of demolition and renovation operations are exempt from the requirements of §§61.05(a), 61.07, and 61.09 [ref. 40 CFR 61.145(a)(5)].
§61.10 - Source Reporting and Waiver Request	Demolition and renovation operations exempt from §61.10(a) [ref. 40 CFR 61.153(b)].
§61.13 - Emission Tests §61.14 - Monitoring Requirements	Emission tests or monitoring is not required under the standards for demolition and renovation [§61.145].
Facility-Wide	

Requirements Not Applicable	Basis for Non-Applicability
40 CFR 61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	No process components in *benzene service*, as defined by subpart (10 percent benzene by weight).
40 CFR 61 Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	Facility does not operate equipment in volatile hazardous air pollutant (VHAP) service (≥10 percent VHAP by weight).
40 CFR 61 Subpart Y - National Emission Standard for Benzene Emissions from Benzene Storage Vessels	Facility does not operate storage vessels in benzene service.
40 CFR 61 Subpart BB - National Emission Standard for Benzene Emissions from Benzene Transfer Operations	Facility does not conduct benzene transfer operations.
40 CFR 61 Subpart FF - National Emission Standard for Benzene Waste Operations	Facility does not conduct benzene waste operations.
40 CFR 61 Subpart A - General Provisions	Requirements only apply to sources subject to any provision of 40 CFR 61.
40 CFR 63 Subpart B – Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections 112(g) and 112(j) (Part I Application Only)	Obsolete requirement - completed as required. BPXA submitted a Part I application for this facility on May 15, 2002.
40 CFR 63 Subpart T - National Emission Standards for Halogenated Solvent Cleaning	Facility does not operate halogenated solvent cleaning machines.
40 CFR 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries	Facility does not meet the definition for a petroleum refinery.
40 CFR 63 Subpart HH - National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities	Facility qualifies for the "black oil exemption" found in 40 CFR 63.760(e)(1).
All Storage Tanks	
40 CFR 63 Subpart OO - National Emission Standards for Tanks - Level 1	Provisions only apply to tanks affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart OO.
Drain Systems	
40 CFR 63 Subpart RR - National Emission Standards for Individual Drain Systems	Provisions only apply to drain systems affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart RR.
All Storage Tanks	
40 CFR 63 Subpart SS – National Emission Standards for Closed Vent Systems	Provisions only apply to tanks affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart SS.
Oil-Water Separators	
40 CFR 63 Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators	Provisions only apply to oil-water separators and organic-water separators affected by 40 CFR 60, 61, or 63 that specifically reference 40 CFR 63 Subpart VV.
Facility-Wide	
40 CFR 63 Subpart HHH - National Emission Standards for Hazardous Air Pollutants for Natural Gas Transmission and Storage Facilities	Facility does not transmit or store natural gas prior to entering the pipeline to a local distribution company or to a final end user.
40 CFR 63 Subpart A - General Provisions, except §63.1(b) and §63.10(b)(3)	Requirements only apply to sources subject to any provision of 40 CFR 63. This facility is not subject to 40 CFR 63 Subpart A, except for the requirement to determine rule applicability (§63.1(b)) and to keep records of rule applicability determination (§63.10(b)(3)).
Facility-Wide (all units) except NGL Plant	
40 CFR 64 - Compliance Assurance Monitoring	These units do not use a control device to achieve compliance with any emission limitation or standard.
NGL Plant	

Requirements Not Applicable	Basis for Non-Applicability
40 CFR 64 - Compliance Assurance Monitoring	Potential pre-control device emissions from the pollutant-specific emission unit (PSEU) are less than 100 tons per year.
Facility-Wide	
40 CFR 68 - Accidental Release Prevention Requirements: Risk Management Programs [§112(r)]	"Naturally occurring hydrocarbon mixtures" (crude oil, condensate, natural gas and produced water) prior to entry into a petroleum refining process unit (NAICS code 32411) or a natural gas processing plant (NAICS code 211112) are exempt from the threshold determination. (See Final Rule exempting from threshold determination regulated flammable substances in naturally occurring hydrocarbon mixtures prior to initial processing, 63 FR 640 [January 6, 1998]). Less than 10,000 lbs of other mixtures containing regulated flammable substances that meet the criteria for an NFPA rating of 4 for flammability are stored at the facility. Therefore, the Central Gas Facility, a crude petroleum and natural gas production facility (NAICS code 211111), does not process or store regulated flammable or toxic substances in excess of threshold quantities.
40 CFR 82.1 Subpart A - Production and Consumption Controls	Facility does not produce, transform, destroy, import or export Class 1 or Group I or II substances or products.
40 CFR 82.30 Subpart B - Servicing of Motor Vehicle Air Conditioners	Facility does not service motor vehicle air conditioners.
40 CFR 82.60 Subpart C - Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Facility is not a manufacturer or distributor of Class I and II products or substances.
40 CFR 82.80 Subpart D - Federal Procurement	Subpart applies only to Federal departments, agencies, and instrumentalities.
40 CFR 82.100 Subpart E - The Labeling of Products Using Ozone-Depleting Substances	Facility is not a manufacturer or distributor of Class I and II products or substances.
40 CFR 82.158 Subpart F - Recycling and Emissions Reduction	Facility does not manufacture or import recovery and recycling equipment.
40 CFR 82.160 - Approved Equipment Testing Organizations	Facility does not contract equipment testing organizations to certify recovery and recycling equipment.
40 CFR 82.164 - Reclaimer Certification	Facility does not sell reclaimed refrigerant.
40 CFR 82, Subpart F, Appendix C - Method for Testing Recovery Devices for Use With Small Appliances	Facility is not a third party entity that certifies recovery equipment.
40 CFR 82, Subpart F, Appendix D - Standards for Becoming a Certifying Program for Technicians	Facility does not have a technician certification program.
40 CFR 82.174(a) Subpart G - Significant New Alternatives Policy Program: Prohibitions	Facility does not manufacture substitute chemicals or products for ozone-depleting compounds.
40 CFR 82.270(a) Subpart H - Halon Emissions Reduction	Facility does not manufacture halon.
18 AAC 50.201 - Ambient Air Quality Investigation	This requirement is not applicable until such time as the Department requests an ambient air quality investigation.
Group I – Gas Turbines: NGI-19-1806, NGI-19-1856, NGI-19-1857, NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886	
AQC Construction Permit 9873-AC006 Conditions VII.C.1 and VII.D.1	The Alaska Title V turbine monitoring workgroup has concluded that Method 9 visible emissions observations are not necessary for gas-fired turbines.

[18 AAC 50.350(l), 1/18/97]

Section 15. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Facility: _____

Location: _____

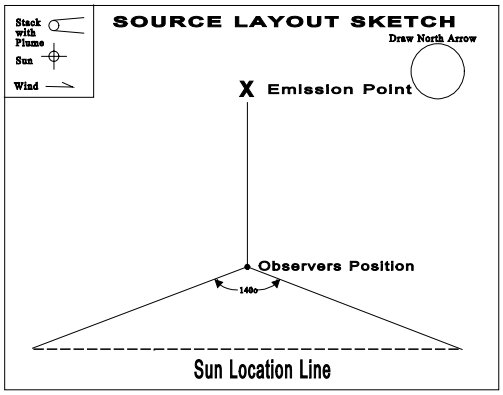
Test No.: _____ Date: _____

Source: _____

Operating Rate: _____

_____

_____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company & Facility _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____ _____

Observer Signature and Date Certified By and Date

Data Reduction:

Duration of Observation Period (minutes) _____ Duration Required by Permit (minutes)_____

Number of Observations _____ Highest Six –Minute Average Opacity (%)_____

Number of Observations exceeding 20 % _____

In compliance with three-minute aggregate opacity limit? (Yes or No) _____

In compliance with six-minute opacity limit? (Yes or No) _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 16. SO_2 Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A = 31,200 x [wt%S_{fuel}] = 31,200 x _____ = _____

B = 0.148 x [wt%S_{fuel}] = 0.148 x _____ = _____

C = 0.396 x [wt%C_{fuel}] = 0.396 x _____ = _____

D = 0.933 x [wt%H_{fuel}] = 0.933 x _____ = _____

E = B + C + D = _____ + _____ + _____ = _____

F = 20.9 − [vol%$_{dry}O_{2,\ exhaust}$] = 20.9 − _____ = _____

G = [vol%$_{dry}O_{2,\ exhaust}$] ÷ F = _____ ÷ _____ = _____

H = 1 + G = 1 + _____ = _____

I = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ ppm

The wt%S_{fuel}, wt%C_{fuel}, and wt%H_{fuel} are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 5.2. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%$_{dry}O_{2,\ exhaust}$) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations, not 0.01, and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c), 5/3/02]

Section 17. Emission Factors

Use the emission factors in Table 6 to calculate the annual emission rates for conditions 8 and 9.

Table 6 - Emission Factors

Equipment	NO_X	CO	PM	SO_2
Turbines, Source ID(s) 5 through 10	Allowable concentration or representative source test data if less than allowable concentration	Representative source test data, if available. Otherwise use 0.082 lb/MMBtu (AP-42, 4/00)	Representative source test data, if available. Otherwise use 0.0073 lb/MMBtu (AP-42, 5/98)	Actual monthly H_2S concentration
Heaters, Source ID(s) 12, 13, and 14	0.08 lb/MMBtu (allowable) or representative source test data if less than allowable	0.061 lb/MMBtu (allowable) or representative source test data if less than allowable.	Representative source test data, if available. Otherwise use 0.0075 lb/MMBtu (AP-42, 7/98)	Actual monthly H_2S concentration

Section 18. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

BP Exploration (Alaska) Inc.
Company Name

Central Gas Facility
Facility Name

Reason for notification:

❑ **Excess Emissions**
If you checked this box
Fill out section 1

❑ **Other Deviation from Permit Condition**
If you checked this box
fill out section 2

When did you discover the Excess Emissions or Other Deviation:
Date:__/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock)**:**

	START Time**:** (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

(b) Cause of Event (Check all that apply)**:**

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

❑ YES ❑ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

❑ YES ❑ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: Signature: Date:

Alaska Department of Environmental Conservation

Air Permits Program

August 4, 2003

BP Exploration (Alaska) Inc.

Central Gas Facility

STATEMENT OF BASIS

of the terms and conditions for

Permit No. 270TVP01

August 4, 2003

Prepared by Robert Dolan

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating/Construction Permit No. 270TVP01.

FACILITY IDENTIFICATION

The facility is operated by BP Exploration (Alaska) Inc. and BP Exploration (Alaska) Inc. (BPXA) is the Permittee for the facility's operating permit. The SIC code for this facility is 1311. The NAICS code of this facility is 211111. BPXA's Central Gas Facility is an existing gas processing facility that consists of four GE Frame 6 natural gas-fired combustion turbines, four Cooper-Rolls natural gas-fired combustion turbines, three GE Frame 5 natural gas-fired combustion turbines, three Chiyoda-John Zink natural gas-fired heaters, three GM diesel fired emergency generators, one Caterpillar diesel fired emergency firewater pump, five IHI-John Zink natural gas-fired vertical flares, several hydrocarbon storage tanks, and a natural gas processing plant.

Section 1 of Operating Permit No. 270TVP01 contains information on the facility as provided in the Title V permit application.

The Central Gas Facility (CGF) was originally permitted on January 10, 1984 under the permitting action known as SWAP IV which was processed by the Environmental Protection Agency (EPA) as an administrative change to Prevention of Significant Deterioration (PSD) permits for other existing facilities at the Prudhoe Bay Unit (PBU). The purpose of SWAP IV was to create additional heater and turbine capacity at the location where the CGF was later constructed using units already permitted but not constructed at other facilities. The facility was subject to PSD review and permitting by EPA, thereby ensuring that CGF process operations were constructed in accordance with EPA PSD rules. The CGF was again subject to PSD review by ADEC in 1992 and 1998. Major modifications were completed at the facility in 1992 in association with the Gas Handling Expansion (GHX) II project, and in 1998, for the Miscible Injectant Expansion (MIX) project.

CGF is designed to improve the overall field gas off-take by recovering natural gas liquids (NGL) and miscible injectant (MI) from the gas and then (together with the Central Compressor Plant [CCP]) compress and return the remaining residue gas into the gas cap of the Prudhoe Bay reservoir. The NGL and MI products are captured from the feed gas stream using a refrigeration/condensation process. Up to 100,000 barrels per day (bbls/day) of NGL can be produced with approximately 30,000 bbls/day shipped to the Kuparuk oil field for MI injection. The remaining NGL production is blended with crude oil and sent to Pump Station 1 (operated by Alyeska Pipeline Service Company). Approximately 600 million standard cubic feet per day (MMscfd) of MI product is produced for use in the Prudhoe Bay oil field. When compressed and re-injected into the oil bearing formation, MI lowers the viscosity of the crude oil, allowing it to flow to the well bore more easily. The overall effect is a significant increase in recoverable oil.

The fuel gas used in all fuel gas-fired equipment at CGF is PBU field fuel gas originating at the CGF. No alternate fuel gas is used at this facility.

Inlet Separation

The purpose of the Inlet Separators is to protect downstream equipment at CGF from entrained liquid hydrocarbon/TEG carryover from the Flow Stations in the Prudhoe Bay Eastern Operating Area (EOA) and Gathering Centers in the Western Operating Area (WOA). Raw gas from the Flow Stations and Gathering Centers (called residue gas at these facilities) is piped to both CCP and CGF. The two CCP Inlet Separators remove entrained liquid in the gas going to CCP. A single CGF Inlet Separator removes entrained liquid in the gas going to CGF.

Feed gas leaving the CCP separators is routed to CGF and recombines with gas leaving the CGF separator. The combined gas is then routed to the Low Temperature Separators (LTS) 1, 2 and 3 via the booster compressors. The entrained liquid, a mixture of triethylene glycol (TEG) and hydrocarbons, segregates into two streams in the CGF Inlet Separator. The recovered hydrocarbon is directed to the Stabilizer, and the TEG is collected in a recovery drum and then trucked out for recycle use by the Flow Stations and Gathering Centers.

Booster Compressors

The purpose of booster compressors is to increase the pressure of feed gas entering LTS-l, 2 and 3 from approximately 540 psig to approximately 660 psig. There are two principal benefits to this pressure increase: to deliver a higher pressure to CCP and to raise the pressure for the LTS, thereby offsetting the pressure losses in these units. Higher pressure also makes it easier to condense a gas into a liquid. Each pair of booster compressors, which feed LTS-l and 2, operates on a single shaft driven by a RB-2ll Rolls Royce gas turbine. The booster compressor, which feeds LTS-3, operates on a single shaft driven by a GE Frame 5 gas turbine. LTS-l and 2 continue to operate with one or more compressors off-line, albeit with lower efficiency.

LTS-1 and 2

The purpose of the LTS system is to separate NGL and MI liquids from lighter non-condensable (mainly methane) components of the hydrocarbon feed gas. Booster discharge gas is cooled to approximately -10°F in a series of exchangers and a reboiler before the gas enters LTS-l and 2. The -10°F combined stream is further cooled to -40°F as it exchanges heat with propane refrigerant in the chiller before entering the LTS units.

To maximize the amount of liquids condensed from feed gas, the propane refrigeration unit and chillers are operated to maintain LTS feed inlet temperatures as low as possible. That temperature is limited by the horsepower/maximum, operating speed of the Refrigeration Compressors, which compress propane vapor. During summer months, reduced J cooling of the refrigeration fin-fan condensers limits the capacity of the system.

Within the separators, the exchange of pumped bottoms with incoming feed provides heat for LTS distillation. Distillation is important to control methane in liquids sent to the stabilizers. The mainly methane LTS overhead vapor (now called residue gas), after exchanging heat with the incoming feed, is routed to CCP for further compression and ultimate re-injection into the gas cap. Liquid from the LTS bottom, after exchanging heat with the incoming feed, is routed to the Stabilizer at 380 psig and 60°F for further processing.

LTS-3

LTS-3 performs the same function as LTS-l and 2 but is a later (1994 versus 1987), more thermally efficient design. When all three LTS trains are in service, LTS-3 is fed directly from the Inlet Separator. Booster discharge gas is cooled to approximately -40°F as it exchanges with propane refrigerant in two parallel chillers before entering LTS-3.

Four tandem compressors (powered by four General Electric Frame 6 gas turbines) take suction on the mainly methane LTS-3 overhead vapors. From there, compressed gas is returned to the gas cap. LTS bottom liquid, after exchanging with the incoming feed, is normally split equally between feed lines to the two Stabilizers where it is further processed.

Stabilization

The purpose of the Stabilization section is to separate lighter MI (methane/ethane/propane/CO_2 components from heavier NGL (butane and heavier) products. This process also produces a stable NGL product suitable for blending with crude oil that goes to the Trans-Alaska Pipeline System (TAPS).

NGL production is controlled to meet the maximum vapor pressure limit (14.7 psia @ 110°F) for the Crude/NGL blend arriving at Pump Station 1. Overhead vapors from the Stabilizer are partially condensed in fin-fan condensers, and condensate collected in the Overhead Drum is pumped back to the column as reflux to control the top tray temperature. Vapors (the non-condensed portion) from the Overhead Drum are fed to the MI Compressors.

MI Compressors

The purpose of MI compressors is to raise the pressure of vapors from the Stabilizer Overhead Drum for injection into dedicated wells in EOA and WOA for enhanced oil recovery (EOR). The two identical, parallel MI compressor trains consist of a RB-211 Rolls Royce gas turbine. The 330 psig supply from the Stabilizer Overhead Drum is increased in two stages: to 1800 psig in the first stage and then to nominal 4000 psig in the second stage MI Compressor. The nominal flow capacity of each MI compressor train is 225 MMscfd, or 450 MMscfd for both. Maximum MI production is between 600 to 650 MMscfd, depending on gas feed rate, ambient temperature, etc.

Refrigeration

The purpose of the Refrigeration System is to provide a cooling medium for the four LTS feed chillers. Raw gas feed to the LTS on the tube side of the chiller is cooled from -10°F to nominal-40°F by flashing liquid propane of 99.9% purity. Approximately 2,850 bbls of propane are contained in the closed loop system.

Refrigeration is a closed loop system consisting of two General Electric Frame 5 gas turbines driving parallel three-stage compressors. There are four fin-fan condenser skids that are common to both compressors.

Heaters and Hot Oil System

Therminol (3,600 bbls) is heated and circulated as the Hot Oil medium for process and utility heating needs throughout CGF. Temperature of the hot oil system is controlled at 525°F by firing three 216 MMBtu/hr gas-fired heaters.

Emergency Systems and Operations

There are a number of emergency systems employed at CGF. Three diesel-driven emergency generators and battery banks with inverters provide emergency electrical power should primary electrical service be lost. The emergency power is typically used to drive process safety and life support systems. A diesel-driven emergency fire water pump provides back-up fire water supply in the event electrical power is lost to the primary electrically-driven fire water pump.

An emergency flare system safely disposes of hydrocarbon gases vented from process equipment during process upsets (unavoidable emergencies or malfunctions), process equipment startups or shutdowns, or de-pressurization for non- routine repair purposes. The flares are operated and maintained consistent with good engineering practice.

Enclosed modules, which house process equipment operated at CGF, are equipped with fire suppression systems. In the event of a fire, Halon 1301 fire suppressant is automatically released to inhibit the chemical reaction of combustion and extinguish the flames.

SOURCE INVENTORY AND DESCRIPTION

Table 1 of Operating Permit No. 270TVP01 contains information on the sources regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the source rating/size provided in the table does not create an enforceable limit.

EMISSIONS

Section 2 of Operating Permit No. 270TVP01 contains emission information as provided in the Title V application. A summary of the potential to emit (PTE)[16] and assessable PTE as indicated in the application from the Central Gas Facility is shown in the table below.

[16] *Potential to Emit or PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources within the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the facility's sources or the facility to emit an air contaminant, including limitations such as restrictions on hours or rates of operation and type or amount of material combusted, stored, or processed as defined in AS 46.14.990(21), effective 1/18/97.

Table A - Emissions Summary, in Tons Per Year (TPY)

Pollutant	NO_X	CO	PM-10	SO_2	VOC	HAPs	Total
PTE	10,968	1,779	305	125	88	59	13,265
Assessable PTE	10,968	1,779	305	125	88	0	13,265

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 TPY. The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the facility. For the combustion sources, essentially all the HAP emissions are a subset of the VOC emissions, so HAP emissions are not included in the total column for the row labeled "PTE". Doing so would double count emissions.

For criteria pollutants, emissions are as provided in the application.

The Department calculated HAP emissions using GRI-HAPCalc®3.01.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 of Operating Permit No. 270TVP01 lists the regulatory classifications of the Central Gas Facility.

This facility is classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in 18 AAC 50.300(c)(1), because it has the potential to emit more than 250 TPY or more of a regulated air contaminant in an area classified as attainment or unclassifiable. As defined by 18 AAC 50.300(b)(2), Central Gas Facility is a facility containing fuel burning equipment with a rated capacity of 100 million Btu per hour or more. As defined by 18 AAC 50.325(b)(1), Central Gas Facility is a facility that emits or has the potential to emit 100 TPY or more of a regulated air contaminant. As defined by 18 AAC 50.325(b)(3), Central Gas Facility is a facility containing a source subject to the standards adopted by reference in 18 AAC 50.040(a)(1), 18 AAC 50.040(a)(2)(C), 18 AAC 50.040(a)(2)(M), 18 AAC 50.040(a)(2)(V) and 18 AAC 50.040(a)(2)(DD). As defined by 18 AAC 50.325(c), Central Gas Facility is a facility described in 18 AAC 50.300(b)-(e) therefore, it is within the category of facilities subject to AS 46.14.130(b)(4).

Central Gas Facility is classified as a "major HACs facility" for Title V purposes but there is no NESHAPs (MACT) standards applicable to the facility at this time. This facility requires an operating permit under 18 AAC 50.325(b)(2) because it is a facility that emits more than or equal to 10 tpy of any single HAC or more than or equal to 25 tpy in aggregate of two or more HACs.

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to Central Gas Facility, the state regulations require a description of:

⇒ Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under18 AAC 50.335(e)(4)(C);

⇒ Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and

⇒ Sources subject to requirements in an existing Department permit 18 AAC 50.335(e)(5).

The emission sources at Central Gas Facility classified as "regulated sources" according to the above Department regulations are listed in Table 1 of Operating Permit No. 270TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate number 9273-AA016, as amended through December 23, 1996. This permit-to-operate includes all previously approved construction authorizations issued through December 23, 1996 for the facility, since it was issued before January 18, 1997. In addition, EPA Prevention of Significant Deterioration (PSD) permit number PSD-X81-13, as amended through August 29, 1997, contains specific BACT requirements for the facility. All facility-specific requirements established in these previous permits are included in the new operating permit as described in Table B.

Construction Permits

Construction Permit No. 9873-AC006 was issued to this facility on July 15, 1998. The facility-specific requirements established in this construction permit are included in the new operating permit as described in Table C.

Title V Operating Permit Application History

The owner or operator submitted an application on December 5, 1997.

The owner or operator amended this application on six separate occasions, the last being March 24, 2003.

COMPLIANCE HISTORY

The facility has operated at its current location since 1986. Review of the permit files for this facility, which includes the past inspection reports indicate a facility generally operating in compliance with its operating permit.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior operating permit. Table B below lists the facility-specific operating permit condition established in Permit-to-Operate No. 9273-AA016, including amendment 1, and the new condition in Operating/Construction Permit No. 270TVP01 that carries the old requirement into the new permit.

Table B - Comparison of Pre-January 18, 1997 Permit-to-Operate No. 9273-AA016 Conditions to Operating Permit No. 270TVP01 Conditions[17]

Permit-to-Operate No. 9273-AA016 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
3 and Exhibit B	Comply with the most stringent of applicable emission standards	3, 4, 5, 6, 7, 8, 9, and 10	The Alaska SIP limits have been carried forward with amendments as listed in 18 AAC 50, dated 5/3/02. Other limits have been carried forward without change or have been corrected, as stated in Tables D, E, F, H, J, K, and L of the Statement of Basis. BACT limits are from PSD permits issued by EPA (PSD-X81-13) as well as ADEC (GHX II and MIX).
5	Monthly testing of fuel gas to determine sulfur (H_2S) content burned in turbines and heaters	5, 13, 28	No change
Exhibit B	Operating hour limits for emergency equipment	11	No change.
6 and Exhibit D, Item 4	Calculate and report the total quantity of sulfur dioxide emitted from the facility	None	This information is no longer required by the Department. The reason for original permit condition is no longer valid. Potential increase of fuel gas sulfur content not considered a PSD modification.
7 and Exhibit C	Permittee shall install, maintain, and operate a continuous monitoring system to measure or estimate fuel consumption by the	12	No change.

[17] This table does not include all standard and general conditions

Permit-to-Operate No. 9273-AA016 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
	turbines and heaters		
13 and Exhibit D	Permittee shall submit quarterly facility operating reports	83	Same requirement
Exhibit C	For process heaters greater than 43 MMBtu/hr the Permittee shall install, maintain, and operate in good working order a CEMS for recording and monitoring flue gas content of CO and O_2	None	No longer necessary. Heaters have been determined to be subject to 40 CFR 60 Subpart Db which requires direct monitoring of NO_X.
Exhibit D Item 3	Permittee shall report the number of hours of operation for each source and the total fuel consumption by source group and the entire facility for each month.	12 and 14	No change, except hours of operation monitoring is no longer required for flares.
Exhibit D Item 4	Report the high, low, mean, and standard deviation of the fuel gas H_2S content annually	None	Condition has been deleted. The Department no longer requires this information.

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior construction permit. Table C below lists the facility-specific construction permit condition that established a requirement in Construction Permit No. 9873-AC006 and the new condition in Operating/Construction Permit No. 270TVP01 that carries the old requirement into the new permit.

Table C - Comparison of Construction Permit No. 9873-AC006 Conditions to Operating Permit No. 270TVP01 Conditions[18]

Permit No. 9873-AC006 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
III.G.	Permittee shall submit quarterly facility operating reports	83	Same requirement
IV.E.1	For GE Frame 5 & 6 turbines document the date construction commences, stops, and when construction is completed for	None	Task completed

[18] This table does not include all standard and general conditions

Permit No. 9873-AC006 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
	each new or modified emission source.		
IV.E.2.	Monitor and record hours of operation for GE Frame 5 & 6 turbines	14	No change
IV.E.3.	Measure the amount of fuel consumed in each GE Frame 5 & 6 turbine	12 and 12.1	No change
IV.F.2.a.	Report fuel usage monthly for GE Frame 5 & 6 turbines	12.1 and 12.2	No change
IV.F.2.b.	Report monthly hours of operation for GE Frame 5 & 6 turbines	14	No change
VI.B.2.	NSPS Subpart GG sulfur standard for fuel gas used in turbines	28	No change
VI.B.3.	NSPS Subpart GG nitrogen standard for GE Frame 5 turbines	26	No change
VI.B.4. and IX.B.2.	NSPS Subpart GG and BACT fuel gas sulfur monitoring	13.1 and 28.1	No change
VI.C.2.	NSPS, 40 CFR 60.632, Subpart KKK…..	29 through 36	The applicable requirements are detailed.
VI.C.4.	Recordkeeping requirements, 40 CFR635, Subpart KKK….	37	The applicable requirements are detailed.
VI.C.5.	Reporting, 40 CFR 60.636, Subpart KKK…..	38	The applicable requirements are detailed.
VII.A. and VII.B.	Comply with Alaska SIP standards for visible emissions, particulate matter emissions, and sulfur compound emissions	3, 4, and 5	No change

Permit No. 9873-AC006 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
VII.B.	The Permittee shall ensure compliance with this requirement by using only natural gas with a hydrogen sulfide content not to exceed 30 ppmv.	13	No change
VII.C.1.	For GE Frame 5 & 6 turbines, conduct visible emission surveillance no less than one each calendar year.	None	Not Carried forward. Current ADEC practice is not to require visible emission monitoring for sources that burn natural gas only.
VII.C.3. and IX.B.2.	For GE Frame 5 & 6 turbines, measure the hydrogen sulfide content of the natural gas fuel once each month	5.1, 13.1, and 28.1	No change
VII.D.1.	For GE Frame 5 & 6 turbines, attach to facility operating report results of visible emission surveillance conducted	None	Not Carried forward. Current ADEC practice is not to require visible emission monitoring for sources that burn natural gas only.
VII.D.3. and IX.C.2.	For GE Frame 5 & 6 turbines, report the monthly natural gas fuel hydrogen sulfide content measured	13.2	No change
IX.A.1.a(1)	Install and operate turbine unit NGI-19-1857 with LHE liner lean-head combustion technology…..	6	No change
IX.A.1.a(2)	Install and operate turbine units NGI-19-1806, 1856, 1883, 1884, 1885, and 1886 with conventional liners…..	None	Task completed (Note: units NGI-18-1806 and 1856 have since been retrofitted with LHE liners.)

Permit No. 9873-AC006 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
IX.A.1.a(3)	No later than August 2002, or the next combustor overhaul interval, whichever comes first, replace conventional turbine liners with LHE liner lean-head combustion technology for turbine units NGI-19-1806 and 1856, except if the LHE lean-head combustion liner report set out in condition IX.C.1(c) demonstrates that the lean-head combustion liners have a service life less than that for conventional liners, or are otherwise technically infeasible.	6	The LHE lean-head combustion liner has been installed. The condition requires operation of these turbine units using LHE liners.
IX.A.1.b.	Oxides of nitrogen emission limits for GE Frame 5 & 6 turbines. (see table)	8	No change, except the limit for Frame 5C turbines with conventional liners no longer applies because all Frame 5C turbines at the facility now have LHE liners.
IX.A.2.	Carbon Monoxide emission limits, each GE Frame 5 turbine must meet a limit of 20 ppmvd and each GE Frame 6 turbine must meet a limit of 10 ppmvd at full load.	8	No change
IX.B.1.a.	Within one year after operations commence conduct 2 NO_X emission tests of Unit NGI-19-1806, NGI-19-1856, NGI-19-1857, and one of units NGI-19-1883, 1884, 1885, or 1886. Within one year of the lean head combustion liner retrofit conduct 2 NO_X emission tests of either Unit NGI-19-1806 or NGI-19-1856…..	None	Task completed
IX.B.1.b.	If source test results are both below 90% of the NO_X limit conduct an emission source test no less than once every five years.	7	No change, except source tests need only be completed on one of a group of like turbines.

Permit No. 9873-AC006 Condition Number	Description of Requirement	Permit No. 270TVP01 Condition Number	How condition was revised
IX.B.1.c.	Except as provided in condition IX.B.1.b. conduct an emission source test no less than once every two years.	None	Condition IX.B.1.b. is the applicable requirement and has been carried forward into Title V operating permit
IX.B.3.a.	Within one year after operations commence conduct a CO emission test of Unit NGI-19-1806, NGI-19-1856, NGI-19-1857, and one of units NGI-19-1883, 1884, 1885, or 1886. Within one year of the lean head combustion liner retrofit conduct a CO emission test of either Unit NGI-19-1806 or NGI-19-1856…..	None	Task completed
IX.B.3.b.	….the Permittee shall keep records which demonstrate each turbine is maintained in good operating condition….	8.7	No change
IX.C.1.a.	Before turbine unit NGI-19-1857 is commissioned, the Permittee shall submit to the Department a copy of documentation that the LHE lean-head combustion liner, or alternative technology capable of achieving the BACT emission limit, has been installed in the unit.	None	Task completed
IX.C.1.c.	No later than September 30, 2000, the Permittee shall submit a report to the Department that evaluates the operation and maintenance of the NGI-19-1857 turbine with respect to lean-head combustion liner technology…..	None	Task completed

REVISIONS MADE TO AIR QUALITY PERMIT-TO-OPERATE 9273-AA016

BPXA submitted a construction permit application under provisions of 18 AAC 50.305(a)(3) requesting modifications of the terms and conditions of former Operating Permit 9273-AA016. BPXA submitted the application to revise or rescind existing permit conditions that are either: 1) in error; 2) do not correctly reflect applicable requirements; 3) are out dated; or 4) are otherwise inappropriate. The current permit was issued under former regulations 18 AAC50.400. Under the provisions of 18 AAC 50.305(a)(3), the owner or operator of a facility may request Department approval in a construction permit to revise or rescind conditions of a permit issued under former 18 AAC 50.400.

On December 5, 1997 ARCO Alaska Inc [ARCO was the operator of the facility in 1997 so the application was submitted under their name. BPXA is the current operator of the facility and the application has been transferred to their name. BPXA will be identified as the applicant for the remainder of this document] submitted a construction permit application requesting revisions to operating permit No. 9273-AA016 for the CGF, along with the Title V operating permit application for the facility. BPXA proposed that terms and conditions in the old operating permit be updated and made identical with EPA PSD permit PSD-X81-13 (PSD IV), amended August 29, 1997 by the EPA.

EPA Region 10 issued PSD permits to BPXA [actually Atlantic Richfield and Sohio Petroleum Companies, the field operators at that time] for construction of new equipment at eight Prudhoe Bay facilities. BPXA worked with EPA to clarify and revise emission limits in the EPA PSD permits. ADEC has been copied on all correspondence with Region 10 in this regard. This effort resulted in issuance by EPA on August 29, 1997, of revisions to the EPA PSD permits. A copy of the permit revisions is included with the Permittee's application. The primary revisions include identification of specific equipment and tag number, apportionment of field-wide ton per year limits to facility–specific equipment group limits, and updating emission limits based solely on AP-42 factors to the values in the edition of AP-42 that were current in 1997.

The permit revision process with EPA was similar to the BPXA request for the ADEC permit revision in that approval was not sought for any new construction or modification. As part of the EPA process, BPXA demonstrated to Region 10 that on a ton per year basis an over all decrease in allowable emissions would occur under the permit revision. The only exception was an increase in allowable SO_2 emissions due to subsequent permitting by ADEC that has raised the SO_2 BACT limit established by EPA in one of the four EPA permits issued (EPA PSD IV).

In general, ADEC sought to include in operating permits issued under the prior 18 AAC 50.400, emission limits corresponding to the BACT limits established by EPA. In many instances however, limits have been applied to equipment, which in fact was grandfathered and installed prior to the PSD program. In some instances, ADEC has also established an emission limit, not via a PSD modification, which has a different value, usually lower, than the EPA BACT limit. In these latter cases, there was no reasonable basis for the lower limit.

With some exceptions which are described below, the majority of the requested revisions to Exhibit B of permit no. 9273-AA016 reflect the BACT emission limits established by EPA in the August 29, 1997 EPA permit revision for Prudhoe Bay facilities. The construction permit application requested that each current EPA BACT emission limit be established as the current limit in the ADEC permit for the facility. Some ADEC limits have been revised to accommodate

the request, or where appropriate, a new limit has been added to address the EPA PSD limit if permit no. 9273-AA016 indicates that no limit applies.

Exhibit B of permit no. 9273-AA016 does not always indicate whether the ton per year values listed by pollutant for each source are estimates or enforceable limits. BPXA has clarified with EPA the correct ton per year emission limits established as BACT limits. Equipment that was permitted under the PSD process by EPA should have ton per year emission limits. The correct emission limits are shown in the August 29, 1997 EPA permit revision. BPXA requested that each ton per year limit established by EPA be incorporated into the Title V operating permit.

With respect to emission limits in tons per year, the permit no. 9273-AA016 does not clearly indicate whether values in columns labeled "potential annual emissions (tpy)" are emission limits. BPXA has determined that equipment permitted by EPA (EPA PSD IV via SWAP IV) should have ton per year emission limits. BPXA has also determined that equipment permitted by ADEC via PSD review (GHX-II) did not have ton per year emission limits, as noted in the ADEC technical analysis report.

BPXA requested revisions to permit no. 9273-AA016 for four GE Frame 6 turbines (Tag Nos. 19-1883, 19-1884, 19-1885, and 19-1886) which were permitted by ADEC for GHX-II. This GHX-II PSD review was significant only for NO_X, CO, and PM. The current emission limits for these pollutants are BACT limits and are correct. ADEC did not establish ton per year emission limits. Regarding sulfur content in fuel, the emission limit of 150 ppmv for H_2S was not a BACT limit. Subsequent to the GHX II PSD review, another PSD review was conducted by ADEC for the Miscible Injectant Expansion (MIX) project at CGF. The MIX PSD review was significant for NO_X, CO, and SO_2 and new BACT limits were established for the GE Frame 6 turbines at that time, which superceded the GHX II PSD BACT limits for NO_X and CO. The ADEC GHX II BACT limit for PM is still applicable to these units.

BPXA requested revisions to the current permit for four Cooper-Rolls turbines (Tag Nos. 19-1801, 19-1802, 19-1805, and 19-1855) which were permitted by EPA in PSD-X81-13 (PSD IV via SWAP IV). The correct BACT limits are shown in the EPA PSD permit, amended on August 29, 1997. BPXA requested that the ton per year limits established by EPA for NO_X, CO, SO_2 and PM be placed in the revised permit.

Additionally, BPXA requested that the CO emission limit for these turbines be revised to 0.17 Ib/MMBtu to reflect the EPA BACT limit, as amended on August 29, 1997. PSD IV does not contain an emission limit for PM other than the ton per year limit, so BPXA requested that the current limit of 14.0 Ib/MMscf be designated an emission estimate for these turbines. PSD IV was significant for SO_2 and EPA revised the SO_2 BACT limit on August 29, 1997. Also, the current opacity limit should be lowered to 10 percent, consecutive 6-minute average, to reflect the EPA PSD IV opacity limit.

BPXA requested revisions to permit no. 9273-AA016 for two GE MS5352B turbines (Tag Nos. 19-1806 and 19-1856) which were permitted by EPA in PSD-X81-13 (PSD IV via SWAP IV), which established BACT limits for NOx (short-term and tpy), CO (short-term and tpy), SO_2 (tpy only), PM (tpy only), and opacity. BPXA requested a new CO limit of 0.17 lb/MMBtu, removal of the PM limit of 0.14 lb/MMscf, and that ton per year limits be added in some cases. Each of these requested changes reflects the current EPA BACT limits, as amended on August 29, 1997.

(Note – these turbines have since been upgraded to GE MS5382C units as part of the MIX permit for CGF. The MIX PSD review was significant for NO_X, CO, and SO_2. ADEC established new NO_X, CO, and SO_2 BACT limits at that time that are more restrictive than the EPA BACT limits for these three pollutants, but the EPA BACT limits have not yet been formally rescinded, so the ADEC and EPA BACT limits are currently applicable to these turbines.)

BPXA requested revisions to the current permit for three Chiyoda-John Zink heaters (Tag Nos. 19-1401, 19-1402, and 19-1403) which were permitted by EPA in PSD-X81-13 (PSD IV via SWAP IV). The only emission limits that should apply to these heaters are those contained in PSD IV, as amended on August 29, 1997. EPA limits were established for these heaters for NO_X, CO, SO_2, and PM. BPXA also requested that the H_2S limit be lowered to 30 ppmv to reflect the EPA BACT limit. Regarding equipment ratings, BPXA requested that the ratings of these units in Exhibit A of permit no. 9273- AA016 be changed from the normal heat release rating to the maximum heat release rating.

BPXA requested revisions to permit no. 9273-AA016 for the GM diesel generator (Tag No. 19-2890). This generator was permitted by ADEC during PSD review for the GHX-II project. This PSD review was significant for NO_X, CO, and PM. Limits for these pollutants in permit no. 9273-AA016 are correct. However, ADEC also established limits for sulfur content in fuel and VOC that are not BACT limits and have no basis. BPXA requested that these limits for sulfur in fuel and VOC be removed.

BPXA requested revisions to the current permit for remaining Group III equipment. These emission units did not go through PSD review, and limits stated in permit no. 9273-AA016 are not BACT limits and have no basis.

BPXA requested revisions to the current permit for the flare system. All emission limits for the flares should be removed because they are not BACT limits and have no regulatory basis. BPXA also requested that the limit be removed for the rating of the flare system. This limit has no basis.

Tables D through L below identify and explain the revisions made to Operating Permit 9273-AA016.

Equipment emission limits requested by BPXA. All emission limitations are annual average unless otherwise noted. All turbine NO_X emission limits and estimates refer to full load, ISO conditions. All other emission limits and estimates refer to full load, standard conditions.

Table D - Sources: GE Frame 6 Turbines NGI-19-1883, NGI-19-1884, NGI-19-1885, and NGI-19-1886

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
NO_X	132 ppmv	125 ppmvd @15% O_2 ISO; 282 lb/hr	Construction permit 9873-AC006
CO	100 lb/MMscf	10 ppmvd at full load	Construction permit 9873-AC006
SO_2	150 ppm H_2S in fuel	30 ppmv H_2S in fuel	Construction permit 9873-AC006
PM	14.0 lb/MMscf	14.0 lb/MMscf	No change. Established as BACT by GHX II PSD permitting action.
Opacity	20%, 3 min/hr	20%, 3 min/hr 20%, 6 consecutive minute average	AK SIP.
VOC	1.07 lb/hr	No Limit.	No BACT or other limit applies.

Table E - Sources: Cooper-Rolls RB211-24C Turbines NGI-19-1801, NGI-19-1802, NGI-19-1805, and NGI-19-1855

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
NO_X	150 (14.4/Y) ppmv	150 (14.4/Y) ppmvd at 15% O_2; 999 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
CO	109 lb/MMscf	0.17 lb/MMBtu; 193 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
SO_2	150 ppm H_2S in fuel	30 ppmv H_2S in fuel; 6.5 tons per year	Owner requested condition EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
PM	14.0 lb/MMscf	16 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
Opacity	20%, 3 min/hr	10%, consecutive 6-minute average 20%, 3 min/hr 20%, consecutive 6-minute average	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision. AK SIP.
VOC	2.3 lb/MMscf	No limit.	No BACT or other limit applies.

Table F - Sources: GE MS5382C Turbines NGI-19-1806 and NGI-19-1856 (listed as GE/MS-5002 in permit no. 9273-AA016)[19]

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
NO_X	150 (14.4/Y) ppm	85 ppmvd at 15% O_2 ISO; 130 lb/hr; 1,115 tons per year	Construction permit 9873-AC006; EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
CO	109 lb/MMscf	20 ppmvd at full load; 0.17 lb/MMBtu (at 100% rated capacity); 269 tons per year	Construction permit 9873-AC006; EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
SO_2	150 ppm H_2S in fuel	30 ppmv H_2S in fuel; 9.0 tons per year	Construction permit 9873-AC006; EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
PM	14.0 lb/MMscf	22 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
Opacity	20%, 3 min/hr	10%, consecutive 6-minute average 20%, 3 min/hr 20%, consecutive 6-minute average	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision. AK SIP.
VOC	2.3 lb/MMscf	No limit.	No BACT or other limit applies.

[19] These units were upgraded to GE MS5382C turbines as documented by AQC Construction Permit No. 9873-AC006, dated July 15, 1998.

Table G - Sources: Chiyoda-John Zink Heaters NGI-19-1401, NGI-19-1402, and NGI-19-1403

Rating in AQCP to Operate 9273-AA016	Revised Rating for Each Unit	Explanation
173 MMBtu/hr	216 MMBtu/hr	New information. Old ratings are normal heat release rates. Revisions reflect maximum values.

Table H - Sources: Chiyoda-John Zink Heaters NGI-19-1401, NGI-19-1402, and NGI-19-1403

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
NO_X	0.08 lb/MMBtu	0.08 lb/MMBtu; 84 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
CO	0.018 lb/MMBtu	0.061 lb/MMBtu 64 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
PM	2.5 lb/MMscf	12 tons per year	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
Opacity	20%, 3 min/hr	5%, consecutive 6-minute average 20%, 3 min/hr 20%, consecutive 6-minute average	EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision. AK SIP.
SO_2	150 ppmv H_2S in fuel	30 ppmv H_2S 5.4 tons per year	Owner requested condition EPA PSD IV BACT via SWAP IV and 8/29/97 permit revision.
VOC	2.3 lb/MMscf	No limit.	No BACT or other limit applies.

Table I - Sources: Chiyoda-John Zink Heaters NGI-19-1401, NGI-19-1402, and NGI-19-1403

Requirement in AQCP to Operate 9273-AA016	Revision Requested	Explanation
Permittee shall install, maintain, and operate in good working order a CEMs for recording and monitoring flue gas content of CO or O_2.	Delete the required monitoring.	It has been determined that 40 CFR 60 Subpart Db applies to these units. Under this NSPS requirement, nitrogen oxide emissions will be monitored directly by a continuous monitoring system. Surrogate monitoring is no longer necessary.

Table J - Source: GM Diesel Generator NGI-19-2890

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
NO_X	146.4 lb/hr	146.4 lb/hr	GHX II BACT limit
CO	2.8 lb/hr	2.8 lb/hr	GHX II BACT limit
SO_2	0.5% S in fuel.	No limit.	No BACT or other limit applies to fuel. No limits are necessary to manage increment given liquid fuel quality.
PM	1.0 g/hp-hr	1.0 g/hp-hr	GHX II BACT limit
Opacity	20%, 3 min/hr	20%, 3 min/hr 20%, 6 consecutive minute average	AK SIP.
VOC	1.12 g/hp-hr	No limit.	No BACT or other limit applies.

Table K - Sources: GM Diesel Generators NGI-19-2802, NGI-19-2819, and Diesel Firewater Pump NGI-19-1529

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
NO_X	14.0 g/hp-hr	No limit.	No BACT or other limit applies.
CO	3.03 g/hp-hr	No limit.	No BACT or other limit applies.
PM	1 g/hp-hr	No limit.	No BACT or other limit applies except for AK SIP.
Opacity	20%, 3 min/hr	20%, 3 min/hr 20%, 6 consecutive minute average	AK SIP.
SO_2	0.5% S in fuel.	No limit.	No BACT or other limit applies to fuel. No limits are necessary to manage increment given liquid fuel quality.
VOC	1.12 g/hp-hr	No limit.	No BACT or other limit applies.

Table L - Sources: Emergency Flares 19-1408, 19-1409, 19-1410, 19-1411, and 19-1412

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
All	3.0 MMscf/day	No limit.	This is the rating of the flare system. There is no BACT or other limit, that restricts the quantity of pilot and purge gas used.
NO_X	140 lb/MMscf	No limit.	No BACT or other limit applies.
CO	35 lb/MMscf	No limit.	No BACT or other limit applies.
PM	5 lb/MMscf	No limit.	No BACT or other limit applies except for AK SIP.

Pollutant	Limit in AQCP to Operate 9273-AA016	Revised Limits for Each Unit	Explanation
Opacity	20%, 3 min/hr	20%, 3 min/hr 20%, 6 consecutive minute average	AK SIP.
SO_2	150 ppmv H_2S	No limit.	No BACT or other limit applies to fuel. No limits are necessary to manage increment given current fuel gas quality.
VOC	2.8 lb/MMscf	No limit.	No BACT or other limit applies.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating/Construction Permit No. 270TVP01.

Conditions 1 and 2, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on "potential to emit" (PTE).

The PTE set forth in the condition is based on liquid fuel with a sulfur content of 0.5 percent by weight or fuel gas with a sulfur content of 30 ppmv H_2S by volume. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content.

Condition 3 and Section 6, Visible Emissions Standard

Applicability: This regulation applies to operation of all fuel-burning equipment in Alaska. Source ID(s) 1 through 23 are fuel-burning equipment. Several of the turbines at the facility are subject to BACT opacity limits contained in the revised EPA PSD IV permit (1997) for the Prudhoe Bay Unit.

Factual basis: Condition 3 requires the Permittee to comply with the federal and the state visible emission standards applicable to fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate these standards. This condition also contains BACT derived opacity limits from previous EPA PSD permits. Turbines (Source IDs 5 through 10) are subject to a 10% opacity limit.

This condition has recently been adopted into regulation as a standard condition. MR&R requirements are listed in Section 6 of the permit.

Gas Fired:

Monitoring – The monitoring of gas fired sources for visible emissions is waived, i.e. no source testing will be required. The Department has found that natural gas fired equipment inherently has negligible PM emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

Reporting – The Permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fuel-Fired:

For the emergency liquid-fuel fired engines, Source ID(s) 15 through 18, as long as none of these sources exceeds 400 hours of operation per consecutive 12-month period, no monitoring is required. The Permittee shall monitor the hours of operation of these sources. If any of these sources exceeds 400 hours of operation, the source is subject to the visible emissions MR&R requirements described in conditions 38 through 40.

Monitoring – The visible emissions must be observed by the Method-9 plan as detailed in condition 39.1. More frequent or less frequent testing may be required depending on the results of the observations.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Flares:

Monitoring for flares (Source ID(s) 19 through 23) requires Method-9 observations of scheduled flaring events lasting more than one hour. This monitoring is in addition to the flare monitoring required by condition 22.1 because it uses a method that will quantify the flare opacity and which specifically targets flare events other than the normal operation of pilot and purge emissions. The Method 22 visible emission observations by themselves do not ensure compliance with the Alaska SIP standard. The Permittee must report the results of these observations to the Department.

Condition 4 and Section 6, Particulate Matter (PM) Standard

Applicability: The PM standard applies to operation of all fuel burning equipment in Alaska. Source ID(s) 1 through 23 are fuel-burning equipment. The SIP standard for PM applies to all fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

Factual basis: Condition 4 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

MR&R requirements are listed in Section 6 of the permit.

Gas Fired:

Monitoring – The monitoring of gas fired sources for particulate matter is waived, i.e. no source testing will be required. The Department has found that natural gas fired equipment inherently has negligible PM emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

Reporting – The Permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fuel-Fired:

For the emergency liquid fuel-fired engines, Source ID(s) 15 through 18, as long as none of these sources exceeds 400 hours of operation per consecutive 12-month period, no monitoring is required. The Permittee shall monitor the hours of operation of these sources. If any of these sources exceeds 400 hours of operation, the source is subject to the particulate matter MR&R requirements described in conditions 41 through 43.
Monitoring – The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

Recordkeeping - The Permittee is required to record the results of PM source tests.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, and 2) results of PM source tests. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Flares:

Monitoring of gas fired flares for particulate matter is waived, i.e. no source testing will be required, because of the difficulty and questionable results these tests produce when applied to flares. The Department has recognized this fact by incorporating the waiver in the State Implementation Plan adopted in November 1984 which has not been federally approved. No recordkeeping or reporting is required.

Condition 5, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. Source ID(s) 1 through 23 are fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual basis: The condition requires the Permittee to comply with the sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Sulfur dioxide comes from the sulfur in the liquid, hydrocarbon fuel (e.g. diesel or No. 2 fuel oil). Fuel containing no more than 0.75 percent sulfur by weight will always comply with the emission standard. For fuels with a sulfur content higher than 0.75 percent, the condition requires the Permittee to use Section 16 to calculate the sulfur dioxide concentration using the equations to show that the standard is not exceeded.

Fuel sulfur testing will verify compliance.

Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in ppmv by volume (ppmv). Calculations[20] show that fuel gas containing no more than 4000 ppmv H_2S will always comply with this emission standard. This is true for all fuel gases, even with no excess air.

Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H_2S concentration of even 10 percent of 4000 ppmv is currently not available in Alaska and is not projected to be available during the life of this permit.

Recordkeeping - For liquid fuel, the Permittee is required to record the fuel sulfur content, and for fuel gas, the H_2S concentration of the fuel gas.

Reporting – The Permittee is required to report as "state" excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standards in this condition. The Permittee is required to include the material balance calculations for fuel oil in the excess emissions report.

The Permittee is required to include copies of the records mentioned in the previous paragraph with the facility operating report.

[20] See ADEC Air Permits Web Site at http://www.state.ak.us/dec/dawq/aqm/newpermit.htm, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO2 Concentration."

Conditions 6 and 7, Construction Permit Requirements Carried Forward

Applicability and Factual Basis: The previous construction permit 9873-AC006 contained conditions that must be carried forward to this Title V permit.

Condition 6 contains a requirement to operate Source ID(s) 9 through 11 using LHE liners as required by the BACT determination of permit no. 9873-AC006. The Permittee must annually certify compliance with this requirement.

Condition 7 contains a requirement to perform periodic source tests on one turbine from each group of like turbines modified as part of the CGF MIX project (one of Source IDs 1 through 4 and one of Source IDs 9 through 11) to demonstrate compliance with the NO_X BACT limits contained in condition 8.

Conditions 8 through 10, BACT and Owner-Requested Emission Limits

Applicability: The BACT limits apply because they were developed during PSD reviews of the facility by the EPA and ADEC (GHX II followed by MIX). These conditions require the Permittee to comply with the emission limits derived from BACT analysis. The Permittee may not cause or allow their equipment to violate these limits.

Factual basis: Between 1979 and 1981, EPA Region 10 issued four PSD permits for Prudhoe Bay Facilities. On August 29, 1997 EPA issued revisions to the four PSD permits. The primary revisions include identification of specific equipment and tag numbers, apportionment of either field-wide or facility-wide ton per year limits to unit specific limits, and updating emission limits based solely on AP-42 factors to values in the edition of AP-42 that were current in 1997.

As part of the EPA process it was demonstrated to Region 10 that on a ton per year basis an overall decrease in allowable emissions would occur under the permit revision. The only exception was an increase in allowable SO_2 emissions due to subsequent permitting by ADEC that raised the SO_2 BACT limit established by EPA in one of the four EPA permits issued (PSD IV).

The majority of these changes reflect the revised emission limits granted by EPA on August 29, 1997. The EPA revisions established ton per year emission limitations for turbines and have been incorporated into this Title V Operating Permit.

For Source ID(s) 5 through 10 (turbines), ton per year emission limits apply for NOx, CO, PM, and SO_2. For NOx and CO, EPA also established short-term BACT emission limits in other terms (i.e. ppmv, lb/MMscf, or lb/MMBtu). However, the short-term EPA NO_X BACT limit was superceded by a more stringent BACT limit established by ADEC in the Miscible Injectant Expansion (MIX) permit. The Permittee has requested short-term SO_2 limits for Source ID(s) 5 through 8 based on the value (30 ppmv) used to calculate the ton per year BACT limit. Specific numerical limits are detailed in condition 8.

For Source ID(s) 12 through 14 (heaters), ton per year emission limits apply for NOx, CO, PM, and SO_2. EPA also established short-term BACT NO_x and CO emission limits of 0.08 and 0.061 lb/MMBtu, respectively. The Permittee has requested short-term SO_2 limits for Source ID(s) 12 through 14 based on the value (30 ppmv) used to calculate the ton per year BACT limit. Specific numerical limits are detailed in condition 9. The Permittee is required to calculate and report emission levels for pollutants with applicable limits.

For Source ID(s) 5 through 10, the Permittee is required to calculate and report emission levels for pollutants with applicable limits. Monitoring for compliance with the short-term turbine BACT emission limit for NOx is identical to that for Subpart GG turbines.

Source ID(s) 1 through 4, and 9 through 11 have NO_x and CO short-term emission rate (lb/MMBtu) BACT limits that were established by ADEC permit no. 9873-AC006 as a result of the CGF MIX permit application. Monitoring for compliance with the short-term emission rate limits is periodic source testing for NO_x and a maintenance protocol for CO.

Source ID(s) 1 through 4 also have a short-term PM BACT limit established by ADEC in the GHX II permit (permit no. 9273-AA016). The short-term NO_X and CO BACT limits established in the GHX II permit for Source ID(s) 1 through 4 and 9 through 11 were superceded by new BACT limits set by the MIX permit (permit no. 9873-AC006).

For Source ID 15 ADEC established short-term BACT NOx, CO, and PM emission limits during review of the GHX II project. Monitoring for compliance with the short-term emission rate limit is a maintenance protocol for NO_x, CO, and PM.

Monitoring – For annual emission limits contained in Table 2 and Table 3 the facility will use fuel consumption and/or hours of operation along with the emission factors contained in Section 17 to calculate monthly emissions and then use the monthly values to determine the twelve-month period summation of emissions.

Recordkeeping – Maintain records of monthly emission levels.

Reporting – Report compliance with annual emission limits for Source ID(s) 5 through 10 and 12 through 14. Notify the Department when annual emission limits are exceeded.

Conditions 11 through 14, Operating and Construction Permit Requirements Carried Forward

Applicability and Factual Basis: The previous operating permit 9273-AA016 and construction permit 9873-AC006 contained conditions that must be carried forward to this Title V permit. Condition 11 contains requirements to limit non-emergency hours of operation for emergency equipment. For Source ID 15, the hours of operation limit is a BACT limit. Condition 12 contains requirements to measure fuel consumption so that annual emission levels may be calculated. Conditions 13 and 14 contain monitoring requirements for fuel gas sulfur content and operating hours.

Conditions 15 through 21, NSPS Subpart A Requirements

Applicability: The Department has incorporated by reference the NSPS effective July 1, 2001, for specific industrial activities, as listed in 18 AAC 50.040.

Most (with the exception of some storage tanks) sources subject to an NSPS are subject to Subpart A. At this facility, Source IDs 1 through 11 are subject to NSPS Subpart GG, Source IDs 12 through 14 are subject to NSPS Subpart Db and Source ID 26 is subject to NSPS Subpart KKK and therefore subject to Subpart A. Although Source IDs 24 and 25 are subject to Subpart Kb, they are affected only by the recordkeeping requirements of this subpart and are not subject to Subpart A.

Condition 15 - Start-up, shutdown, or malfunction record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to all NSPS sources subject to Subpart A (Source IDs 1 through 14, and 19 through 23). (Note - Source ID 26 is exempt from §60.7(b) by Subpart VV (incorporated by reference in Subpart KKK)).

Condition 16 - Excess emission reporting requirements in 40 C.F.R. 60.7(c) & (d) are applicable to Source IDs 1 through 14 because there are applicable emission standards. The Department has included in Attachment A of the basis a copy of the federal EEMSP reporting form for use by the facility.

Condition 17 - Performance (Source) Tests requirements contained in 40 C. F. R. 60.8 are applicable to Source IDs 1 through 11.

Condition 18 - Good air pollution control practices in 40 C.F.R. 60.11(d) are applicable to all NSPS sources subject to Subpart A (Source IDs 1 through 14, 19 through 23, and 26).

Condition 19 – Continuous Emissions Monitoring procedures in 40 C.F.R. 60.13 are applicable to Source ID(s) 12 through 14.

Condition 20 – Credible Evidence procedures in 40 C.F.R. 60.11(g) are applicable to all NSPS sources subject to Subpart A with applicable standards (Source IDs 1 through 14, 19 through 23, and 26).

Condition 21 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to Source IDs 1 through 14, 19 through 23, and 26.

Recordkeeping requirements in 40 C.F.R. 60.7(f) are applicable to all NSPS sources. These requirements are satisfied by permit condition 80.

Factual Basis: General provisions of 40 CFR 60, Subpart A apply to owners or operators who are subject to a relevant subpart under Part 60, except when otherwise specified in an applicable subpart or relevant standard. The intent of Subpart A is to eliminate the repetition of requirements applicable to all owners or operators affected by NSPS.

Condition 22, NSPS Subpart A, General Con Device Requirements

Applicability: NSPS Subpart A, General Control Device Requirements, applies to the facility flares (Source IDs 19 through 23) because they are used as control devices for Source ID 26, the NGL Plant, which is subject to NSPS Subpart KKK.

Factual Basis: This condition cites the applicable parts of 40 CFR 60.18 and incorporates appropriate monitoring, recordkeeping, and reporting requirements to ensure compliance with these federal requirements.

Condition 23, NSPS Subpart Kb Requirements (Recordkeeping Only)

Applicability: NSPS Subpart Kb applies to storage tanks that were built or modified after July 23, 1984. Source ID(s) 24 and 25 were built after July 23, 1884. Source ID(s) 24 and 25 have storage capacities of greater than 10,000 gallons and store volatile organic liquids (VOLs). However, they are subject to only the recordkeeping requirements in Subpart Kb because they qualify for the exemptions stated in 40 C.F.R. 60.116b(a) & (b).

Factual Basis: This condition incorporates Subpart Kb recordkeeping requirements. Because the condition is a permanent recordkeeping condition, no monitoring or reporting is required to ensure compliance with these federal requirements.

Conditions 24 and 25, NSPS Subpart Db Requirements

Applicability: NSPS Subpart Db applies to steam generating units that were built or modified after June 19, 1984 and that have a heat input capacity from fuels combusted of greater than 100 million Btu/hr. Source ID(s) 12 through 14 were built after June 19, 1984 and have a capacity greater than 100 million Btu/hr and are subject to the sections of NSPS Subpart Db that apply to gas-fired heaters with a heat input capacity less than 250 MMBtu/hr, an annual capacity factor of greater than 10 percent, and a low heat release rate as defined by 40 CFR 60.41b. In addition, the paragraphs of 40 CFR 60.13 pertaining to calibration, maintenance, and operation of a continuous emissions monitoring system apply to the CEMS installed to monitor NO_X emissions from Source ID(s) 12 through 14.

Factual Basis: This condition incorporates the Subpart Db emission standard for nitrogen oxides and the monitoring, recordkeeping, and reporting required to ensure compliance with the standard. The facility must install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring nitrogen oxides discharged to the atmosphere.

Conditions 26 and 28, NSPS Subpart GG Requirements

Applicability: NSPS Subpart GG applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 degrees F, and 14.7 psi) equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired and constructed, modified, or reconstructed after October 3, 1977.

Factual Basis: These conditions incorporate NSPS Subpart GG NO_X emission and sulfur compound limits. The Permittee may not allow equipment to violate these standards.

NO_X Standard: For a turbine subject to 40 C.F.R. 60.332, the NO_X standard is determined by the following equation:

$$STD_{NOX} = 0.015(14.4 / Y) + F$$

where,

STD_{NOX} = allowable NO_X emissions (percent by volume at 15 percent oxygen and on a dry basis)

Y = manufacturer's maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected facility. The value of Y shall not exceed 14.4 kJ/W-hr

F = NO_X emissions allowance for fuel bound nitrogen, percent by volume, **assumed to be zero for Alaska fuel**.

Based on the manufacturer's heat rating at manufacturer's rated peak load, and assuming fuel bound nitrogen of zero, the NO_X standard is 213 ppmvd for Source ID(s) 5 through 8 and 176 ppmvd for Source ID(s) 9 through 11.

The fuel gas nitrogen monitoring requirement of 40 CFR 60.334(b) has been waived for this facility per correspondence from EPA dated August 19, 1996. Therefore, fuel gas nitrogen monitoring is not required by this permit condition for NSPS Subpart GG.

SO_2 Standard: The Permittee is required to comply with one of the following sulfur requirements for Source ID(s) 1 through 11 (turbines):

(1) do not cause or allow SO_2 emission in excess of 0.015 percent by volume, at 15 percent O_2 and on a dry basis (150 ppmv), or

(2) do not cause or allow the sulfur content for the fuel burned in Source ID(s) 1 through 11 to exceed 0.8 percent by weight.

The Permittee has elected to comply with the fuel sulfur content limit.

Exemptions – Source ID(s) 1 through 4 are exempt from the Subpart GG NO_X standards of 40 CFR 60.334(a)(2) because they qualify for the exemption found in 40 CFR 60.332(d). That is, the manufacturer's rated base load for these units at ISO conditions is greater than 30 MW.

Condition 27, NO_X Monitoring, Recordkeeping, and Reporting

Applicability: Periodic monitoring is included in condition 27. This additional monitoring is necessary to ensure that turbine emissions stay below the NSPS NO_X standard.

Factual basis: The Department does not have enough information to make categorical determinations that certain types of turbines, or turbines with emission test results below a certain percentage of the Subpart GG NO_x emission limit will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NO_x data is gathered under monitoring conditions for compliance with 40 C.F.R. 60, Subpart GG, the Department may find that it has enough information to make such categorical determinations. In that event, the Department would revise the NO_x monitoring conditions. The Department may determine that to assure compliance it is necessary to retain or increase the current monitoring frequency.

These conditions do not include the initial NSPS performance test requirements. If a turbine under this permit is still subject to the performance test requirement of 40 C.F.R. 60.8, a source specific condition will be necessary.

The intent of these conditions is that turbines or groups of turbines be initially tested on a 5-year cycle. If no testing is required during the permit term, and if the same condition were used in the renewal permit initial testing could be on a 10-year testing cycle. After the first testing cycle, the Department intends to re-evaluate the necessary monitoring frequency.

The condition does not state how load must be measured. For some turbines it may be possible to directly measure load as either mechanical or electrical output. For others, it may be necessary to calculate load indirectly based on measurements of other parameters. The Department is not attempting to dictate what method is most appropriate through the permit condition, but should evaluate the adequacy of methods of calculating load based on the load monitoring proposed by the Permittee.

The condition requires testing at a range of loads, consistent with the performance test requirements in Subpart GG, that is, test at 30, 50, 75, and 100 percent load. If testing at these four loads is not reasonable, the condition allows the Permittee to propose to the

Department what test loads will be reasonable and adequate, and the Department will have the responsibility to make a finding on that proposal. If EPA has already approved alternative test loads for the initial performance test the Department would allow those test loads if the information that went into that decision were still representative of the turbine operation.

In condition 27.3c(i)(C), the Department considers "fuel type" to mean, for liquid fuels a type of fuel as described in an ASTM or similar fuel specification.

Load measurements or load calculations from load surrogate measurements are for one-hour periods. The intent is to match the averaging period for the test method. Method 20 identifies a number of traverse points that vary with the size of the stack. From these points the tester is to choose at least 8 points for NO_x measurements. The time at each point is to be at least one minute plus the average response time of the instrument. The recorded value is the average steady state response. Presumably, the steady state response would exclude some or all of the response time of the instrument. Three runs are to be done at each test load.

The three runs would represent 24 minutes of measurement time or more. A one-hour average load is therefore a reasonable approximation of a load period corresponding to the test method.

Condition 28, SO_2 Monitoring, Recordkeeping, and Reporting

Applicability: This condition incorporates NSPS Subpart GG SO_2 emission and sulfur compound limits. The Permittee may not allow equipment to violate these standards for Source ID(s) 1 through 11.

Factual Basis*:* Monitoring, recordkeeping, and reporting requirements for this condition are described in NSPS Subpart GG and have been referenced here. No additional monitoring outside of the Subpart GG requirements is necessary to ensure compliance with the NSPS SO_2 standard.

Monitoring: Condition 28.1 incorporates NSPS Subpart GG fuel sulfur monitoring requirements and cites the monitoring requirements of the EPA approved alternative monitoring plan and schedule granted to BPXA in accordance with 40 C.F.R. 60.334(b)(2). EPA approved the alternative monitoring plan and schedule in correspondence to BPXA dated July 13, 1993, August 20, 1993, October 18, 1993, August 19, 1996, and October 2, 1997.

Recordkeeping: The Permittee is required to maintain records of all sulfur monitoring data required by NSPS Subpart GG for five years as set out in 18 AAC 50.350(h)(5). This requirement is stated in condition 80.

Reporting: NSPS Subpart GG fuel sulfur reporting requirements as established under the approved custom fuel monitoring schedule are incorporated in the permit in condition 28.3a. Although the approved reporting schedule allows the Permittee to report the fuel data annually, BPXA has requested that the permit require semi-annual reporting. For the purpose of the EEMSP reports and summary reports required under 40 CFR 60.7(c) and (d), the Permittee must report any periods during which the sulfur content of the fuel being fired in the turbine exceeds 0.8 percent by weight as excess emissions. In condition 28.3c the Department requests that copies of the results from the monitoring requirements in condition 28.1 be included in the facility operating report required under condition 83.

Conditions 29 through 38, NSPS Subpart KKK Requirements

Applicability: NSPS Subpart KKK applies to the facility because it is engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to gas products, or both, and is located onshore. These conditions incorporate Subpart KKK standards and the requirements necessary to ensure that those standards are met. Subpart KKK frequently references the equipment requirements contained in Subpart VV.

Factual Basis: Conditions 29 through 36 contain processing equipment standards and monitoring requirements designed to minimize VOC leaks and detect any that occur at an early stage and institute repairs. These requirements are drawn from Subpart VV where standards had already been developed for

- pumps in light liquid service;
- compressors;
- pressure relief devices in gas/vapor service;
- open-ended valves or lines;
- valves in gas/vapor service in light liquid service;
- pumps and valves in heavy liquid service, pressure relief devices in light liquid service or heavy liquid service, and flanges and other connectors; and
- closed vent systems and control devices.

For recordkeeping the facility must keep a log for 5 years that details leaks detected and repairs accomplished. This log is available for agency inspection. Condition 38 requires the facility to submit semi-annual reports to both EPA and ADEC documenting leaks and repairs.

Conditions 39 through 44, (Section 6), Visible Emissions and PM Monitoring Plan

Applicability: Apply because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Each permit term and condition must include MR&R requirements showing verifiable compliance with each permit term and condition. The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Facility Operation and Maintenance Program, that the facility is in continuous compliance with the State's emission standards for visible emissions and particulate matter. The correlation between particulate matter and visible emissions that is the basis for this monitoring procedure is discussed under conditions 3 and 4.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid fuel-fired sources. Equipment types covered by these conditions are internal combustion engines. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program. The monitoring frequency in condition 39 is not as frequent as in 18 AAC 50.346(c) because all the monitored equipment is emergency equipment, which would seldom experience more than 400 hours of operation per year.

Monitoring frequencies for equipment fired using liquid hydrocarbon fuels are detailed in these conditions.

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

More details are found in the Factual Basis statement for conditions 3 and 4.

Conditions 45, (Section 6), Visible Emissions MR&R Plan for Flares

Applicability: Applies because this condition details the monitoring, recordkeeping, and reporting required to demonstrate compliance with condition 3 for gas-fired flares.

Factual Basis: Condition 45 was developed to provide a standardized version of flare monitoring that is not dependent upon the type or design of upstream equipment. It has been claimed that gas-fired flares normally burn without emitting visible emissions, but actual field data demonstrating this assumption is not available. However, gas-fired flares have been shown to smoke when a control device, i.e. a knockout drum, flare scrubber, gas or steam assist, or vapor recovery system malfunctions. Thus, the condition sets out a protocol to collect actual field data to determine compliance with the 20 percent opacity standard for flares.

A recent Department analysis of industry flaring operations indicates that 49 percent of the gas flared (by volume) is for pilot/purge, 25 percent is for flaring less than one hour, and 26 percent is for flaring that lasts more than one hour. Pilot/purge flaring constitutes half of all flaring by volume and is continuous in nature and can be observed at any time. This type of flaring has not caused violations of the opacity standard in the past and can be checked at any time by agency inspectors. The remaining half of the flaring volume is split evenly between less than and greater than one-hour duration. Therefore, the monitoring scheme in this condition addresses the half of the non-continuous flaring operations that are scheduled and for which a certified observer can reasonably be located onsite.

Since it is impractical to require facilities to have a certified Method-9 opacity reader on site for unpredictable emergency flaring, the monitoring protocol requires Method-9 readings only during scheduled flare events. Scheduled events such as those generated by maintenance activities and well testing of greater than one-hour in duration will be observed. These one-hour events are currently quantified and reported to the Alaska Oil and Gas Conservation Commission for other reasons and thus provides a confirming information record of the occurrence of these events. Only those events as defined in the condition need to be monitored. If no events meeting this definition occur during the life of the permit then no monitoring is required.

Since only flaring that is scheduled and exceeds one hour is required to be observed, operators will have time to provide certified Method-9 readers onsite. Most oil and gas production facilities in Alaska are located at remote sites, so it is not reasonable to self-monitor all or even a large sample of the flaring that occurs. Data collected from planned events will help the Department refine this monitoring scheme during future permit cycles. Process upsets and emergency events that may or may not exceed one hour occur randomly and do not lend themselves easily to periodic monitoring. At this time, the Department will rely on facility excess emission reports, citizen complaints, and agency inspections for information concerning these short term and emergency events.

Condition 46, NESHAPS Applicability Determinations

Applicability: The Permittee has the responsibility to determine if specific federal NESHAP regulations apply to its facilities.

Factual basis: The condition requires the Permittee to retain records of NESHAP applicability determinations.

Conditions 47 and 48, Halon Prohibitions

Applicability: These prohibitions apply to all facilities that use halon for fire extinguishing and explosion inertion. The Central Gas Facility uses halon and is therefore subject to the federal regulations contained in 40 CFR 82.

Factual basis: These conditions incorporate applicable 40 CFR 82 requirements. The Permittee may not cause or allow violations of these prohibitions. No additional MR&R requirements are required to ensure compliance with these federal requirements.

Conditions 49 through 52, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes, fuel-burning equipment, and incinerators re[illegible]less of size.

Factual basis: The conditions re-iterate the general standards and require compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The Department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 49 requires certification that the sources did not exceed state emission standards during the previous year and did not emit any prohibited air pollution.

State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20% for more than 3 minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

Conditions 53 through 55, Compliance Plan and Schedule

Applicability: State regulations require that a Title V operating permit contain a compliance plan for permit conditions for which the facility is currently in violation.

Factual Basis: Conditions 53 and 54 require that the Permittee take actions within a fixed time period to comply with parts of 40 C.F.R. 60.18 or to obtain approval from EPA to use alternative methods to comply with the federal requirements. Condition 55 requires that the Permittee obtain a determination from EPA regarding the applicability of 40 C.F.R. 63 Subpart HH to the Central Gas Facility. If 40 C.F.R. 63 Subpart HH does apply, then the Permittee must comply with the applicable provisions of the subpart in a timely fashion and apply for an amendment to the operating permit, as required by condition 92 of the permit.

The Permittee is also required to submit progress reports until the compliance issues are resolved.

Compliance Status as of March 2003 with conditions 53 and 54: In correspondence provided in 1997 and 1998 by ARCO Alaska, Inc. to EPA, the Permittee requested EPA approval of the methods used by the Permittee as alternatives to the EPA reference methods for determining the flare exit velocity and as alternatives to using a thermocouple to monitor the presence of a pilot flame for the flares. To date, EPA has not provided a final determination regarding use of the requested alternative methods. BPXA is actively working with EPA toward resolution and approval of the proposed alternative methods.

Condition 56, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 57, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in

such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 58, Good Air Pollution Control Practice

Applicability: Applies to all sources, **except** NSPS regulated sources, i.e., except Source ID(s) 1 through 14, 19 through 23, and 26.

Factual basis: The condition requires the Permittee to comply with good air pollution control practices for all sources.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the Department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 59, Dilution

Applicability: This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50. No specific monitoring for this condition is practical. Other than the required annual certification, no monitoring, recordkeeping or reporting is necessary for this condition. The Permittee presently does not dilute emissions. Dilution would probably require a physical change to the facility. A reasonable inquiry and certification by a responsible official as to whether such changes occurred over the reporting period is sufficient to assure compliance.

Condition 60, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Bulk material handling requirements apply to the Permittee because the Permittee could engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Condition 61, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Other than the required annual certification, no monitoring, recordkeeping or reporting is necessary for this condition. The Permittee presently does not inject wastes into stacks. Waste injection would probably require a physical change to the facility. A reasonable inquiry and certification by a responsible official as to whether such changes occurred over the reporting period is sufficient to assure compliance. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 62, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the facility.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 63, which requires a record of complaints. Therefore, the Department does not believe that additional r[illegible]toring is warranted.

Condition 63, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the facility because the facility will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the Department.

The Department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 64, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the facility because the facility contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other "technologically feasible" determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 81. Excess emission reporting under condition 81 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 81.

Condition 65, Hazardous Air Pollutant (HAP)[21] Reconstruction

Applicability: Applies to the facility because the facility is a hazardous air pollutant-(HAP-) major facility as described in 18 AAC 50.300(f).

Factual Basis: The condition requires the Permittee obtain written approval from the Department before reconstructing a HAP-major source. Pre-construction approval for reconstructing a HAP-major source is a requirement of the Clean Air Act. Alaska's construction permit program does not require a construction permit for reconstructing a source, only for reconstructing a facility. Therefore, this condition is a standard condition in all HAP-major facility operating permits.

Condition 66, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: The Permittee is required to submit an application for permit renewal by the specific dates applicable to Central Gas Facility as listed in this condition. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal. No additional requirements are necessary to ensure compliance with this condition.

Condition 67, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the Department. Monitoring consists of conducting the requested source test.

Conditions 68 through 70, Operating Conditions, Reference Test Methods, Excess Air Requirements

[21] Also known as Hazardous Air Contaminant (HAC).

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source tests as set out in conditions 68 through 70. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with conditions 68 through 70 consists of the test reports required by condition 75.

Condition 71, Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 72 through 75, Test Deadline Extension, Test Plans, Notifications and Reports

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

Condition 76, Particulate Matter (PM) Calculations

Applicability: Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. Because this condition supplements specific monitoring requirements stated elsewhere in this permit no MR&R is required.

Condition 77, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be certified with the facility operating report, even though it must still be submitted more frequently than the facility operating report. This condition supplements the reporting requirements of this permit.

Condition 78, Submittals

Applicability: Applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit.

Condition 79, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition.

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

Condition 80, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 81, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The reports themselves and the other monitoring records required under this permit provide monitoring of whether the Permittee has complied with the condition.

Condition 82, NSPS and NESHAP Reports

Applicability: Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The reports themselves provide monitoring for compliance with this condition.

Condition 83, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

Condition 84, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. The reports themselves provide monitoring for compliance with this condition.

Conditions 85 through 91, Standard Conditions

Applicability: Apply because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 92, Permit Shield

Applicability: Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Table 5 of Operating Permit No. 270TVP01 shows the permit shields that the Department granted to the Permittee. The permit conditions set forth the requirements that the Department determined were not applicable to the facility. The following table shows the requests that were denied and the reasons that they were denied. The Department based the determinations on the permit application, past operating permit, construction permits and inspection reports.

Table M - Permit Shields Denied

SHIELD REQUESTED FOR:	REASON FOR SHIELD REQUEST:	REASON FOR REQUEST DENIAL:
Facility-Wide		
18 AAC 50.045(b) – Prohibitions	The permit implements all applicable air quality requirements for the facility. Since compliance with the permit will constitute compliance with applicable local, state, or federal air quality laws, this requirement is not applicable to the facility.	These prohibitions are ongoing requirements and therefore cannot be shielded. The prohibitions have not been placed in the permit because they add no value to the permit with respect to controlling facility emission sources. These prohibitions remain in effect because they are in regulation whether they appear in the facility operating permit or not. Shielding the applicant from subparagraph (b), for instance, would have the effect of shielding the applicant from all requirements contained in the Air Quality Control Regulations including the requirement to obtain a permit if the shield requested is granted.
18 AAC 50.045(c) – Prohibitions	This requirement will be implemented through 18 AAC 50.201, which is otherwise addressed in the permit. This requirement is not applicable because the department will impose any special requirements to protect ambient air quality through permit conditions adopted under 50.201.	
AQC Permit 9273-AA016 Condition 2	This requirement expired on 11/11/94. Condition no longer applicable.	There is no need to shield the Permittee from requirements of previous operating permits. According to state regulation 18 AAC 50.340(i**) Permit Continuity** an operator must comply with a permit issued before January 18, 1997 until the department issues a Title V operating permit. Therefore, there is no reason to shield BPXA from a permit that they no longer need to comply with once this operating permit is issued. Facility-specific conditions from permit number 9273-AA016 that need to be carried forward into this operating permit according to regulation 18 AAC 50.350(d)(1)(D) have been identified in Table B of the basis.
AQC Permit 9273-AA016 Condition 3	The proposed Title V permit conditions have included the most stringent applicable emission standards. This requirement is no longer needed.	
AQC Permit 9273-AA016 Conditions 1,4, 8-12, 15	These permit conditions are not "facility-specific requirements". Therefore, they are not required to be identified in the Title V permit application [ref. 18 AAC 50.335(e)(5)].	
AQC Permit 9273-AA016 Condition 6 and Exhibit D, item 4	The requirement to calculate and report monthly SO_2 emissions was instituted in response to ADEC's concern that increasing sulfur in fuel content due to reservoir aging could cause a PSD modification. ADEC has previously granted North Slope facility operator requests to remove this condition from the permits of other North Slope facilities.	
AQC Permit 9273-AA016 Exhibit C - (requirement to install, maintain, and operate a CEM system for recording and monitoring flue gas content of CO or O_2 for Source tag nos. NGI-19-1401, NGI-19-1402, and NGI-19-1403)	It has been determined that 40 CFR 60 Subpart Db applies to these units. Under this NSPS requirement, NO_X emissions are now monitored directly by a continuous monitoring system. Surrogate monitoring is no longer necessary.	
AQC Construction Permit 9873-AC006 Condition IX.C.1.a	Obsolete requirement – completed as required. AAI submitted documentation to the Department on July 30, 1999 indicating that LHE lean-head combustor liner has been installed on turbine tag no. NGI-19-1857.	There is no need to shield the Permittee from requirements of previous construction permits. According to state regulation 18 AAC 50.340(i**) Permit Continuity** an operator must comply with a permit issued before January 18, 1997 until the department issues a Title V operating permit. Therefore, there is no reason to shield BPXA from a permit that they no longer need to comply with once this operating/construction permit is issued. Facility-specific conditions from permit number 9873-AC006 that need to be carried forward into this operating permit according to regulation 18 AAC 50.350(d)(1)(D) have been identified in Table C of the basis.
AQC Construction Permit 9873-AC006 Condition IX.C.1.c	Obsolete requirement - completed as required. BPXA submitted documentation to the Department on September 28, 2000 regarding the technical feasibility of the LHE lean-head combustor liner.	
AQC Construction Permit 9873-AC006 Conditions II.A through II.H, III.D.1, III.D.2, III.E, III.F, IV.B (second paragraph), IV.C, IV.D, IV.F.1, V.A through V.C, VII.C.2, VII.D.2, VIII.C	These permit conditions are not "facility-specific requirements". Therefore, they are not required to be identified in the Title V permit application [ref. 18 AAC 50.335(e)(5)]	

Attachment A

Figure 1--Summary Report -- Excess Emission and Monitoring System Performance

Pollutant (Circle One—SO_2/NO_X/fuel sulfur)
Reporting period dates:
From _____to _____
Company:
Emission Limitation _____
Address:
Monitor Manufacturer and Model No. _____
Date of Latest CMS (CEMS and PEMS) tification or Audit
_____
Process Unit(s) Description:
Total source operating time in reporting period[1]_____

Emission data summary[1]	CMS (CEMS and PEMS) performance summary[1]
1. Duration of excess emissions in reporting period due to:	1. CMS (CEMS and PEMS) downtime in reporting period reporting period due to:
a. Startup/shutdown _____	a. Monitor equipment malfunctions ____
b. Control equipment problems _____	b. Non-Monitor equipment malfunctions ____
c. Process problems _____	c. Quality assurance calibration ____
d. Other known causes _____	d. Other known causes ____
e. Unknown causes _____	e. Unknown causes ____
2. Total duration of excess emission _____	2. Total CMS (CEMS and PEMS) Downtime ____
3. Total duration of excess emissions X (100) [Total source operating time] _____%[2]	3. [Total CMS (CEMS and PEMS) Downtime] X (100) /[Total source operating time] _____%[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.
[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS (CEMS or PEMS) downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in this condition shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name

Signature